APPENDIX A
IN THE

United States Court of Appeals

FOR THE FIFTH CIRCUIT

No. 27492, et al

SOUTHERN LOUISIANA AREA RATE CASES

AUSTRAL OIL CO., ET AL,

Petitioners,

versus

FEDERAL POWER COMMISSION,

Respondent.

Petition for Review of Orders of the Federal Power Commission (Texas Case)

(March 19, 1970)

Before THORNBERRY, COLEMAN and MORGAN, Circuit Judges.

THORNBERRY, Circuit Judge: This is a proceeding to review orders of the Federal Power Commission setting maximum rates for wellhead sales of natural gas produced in the Southern Louisiana area. Thirty-seven producer petitioners challenge the rates as too low.[1] Eight pipeline companies are also involved in

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[1]In discussing the issues in this case, we have usually simplified the positions of the parties by considering them as producers, consumers, and the Commission. Our review of the case, however, has taken into account subtler differences among the

the proceedings, and they concur with the producers that the rates are too low.[2] On the other hand, certain consumer interests have intervened and attack the rates as too high.[3] The Federal Power Commission presents a third position by arguing that its orders should be sustained in full.[4] The result of this trichotomy of conflicting positions — producers, consumers, and the Commission — is a case as complex as it is important.

We have determined that the orders of the Commission should be sustained in full. We add, however, that

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parties. Most of the producers, for example, have joined a single group, the Amerada group, in briefing their argument, but others have chosen to present their arguments separately. Particularly conspicuous among these separate petitioners are several small producers, and we have treated their special arguments herein. The method of presentation is a question for the parties themselves. We think, however, after considering this case, that it is to the great advantage of the parties in a complex, multi-party case to aggregate their arguments in so far as possible.

[2]The pipelines purchase gas from the producers, and it seems anomalous at the outset that they are arguing that prices are too low. The Commission found that the inelasticity of market demand for gas at the consumer level "tends to make price a second level consideration" to pipelines. 4 Joint Appendix, pt. 1, at 533d (Commission's opinion). Pipelines sometimes own production factors as well. A significant reason for the pipelines' alignment here, however, may be simply that they are concerned that the price level will not elicit sufficient supply for their needs. At oral argument, they represented that informal rationing procedures among pipeline purchasers were now in effect and that formal agreements might be necessary in the future.

[3]These parties include the New York Public Service Commission and the Municipal Distributors Group, a group of municipally owned gas distribution systems.

[4]It is supported in this position by the Associated Distributors Group (ADG) of intervenors, a group of privately owned local utility companies.

this affirmance does not reflect full satisfaction with the performance that the Commission has turned in, but rather a recognition that the process of producer regulation is a difficult one that the Commission must have latitude to adapt to changing conditions. In the section of this opinion that immediately follows, we describe this process, together with the legal events that have led to its development, and set out the Commission's actions in the cases before us. In a second section, we deal with the consumer arguments that the rates are too high. The third section takes up the producer arguments that the rates are too low. Herein, we discuss what we believe is the most serious problem presented by these cases: The possibility that the Commission has not adequately considered the problem of new gas supply in relation to demand. There is evidence of a serious supply deficiency. Fourthly, we summarize our conclusions and indicate improvements that should be expected in the regulatory process. In this final section, we also consider the stay that has prevented the Commission's orders from going into effect through this stage of review.

I. THE PROCESS OF AREA REGULATION AND THE COMMISSION'S OPINIONS

The beginnings of producer area regulation were inauspicious. Ever since the enactment of the Natural Gas Act in 1938,[5] the FPC has had the responsibility of regulating sales by interstate pipeline companies, but it was not until 1954 that the Supreme Court held in *Phillips Petroleum Co. v. Wisconsin*,[6] that the Act also

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[5] 15 U.S.C. § 717 *et seq.* (1963); 52 Stat. 821 (1938).
[6] 347 U.S. 672, 74 S.Ct. 794, 98 L.Ed. 1035.

gave the Commission power to regulate sales by independent producers at the wellhead. The Commission was convinced that producer regulation would be impractical and consequently was reluctant to assume its new role.[7] Congress was willing to amend the Act to exclude producers. But the aftermath of the *Phillips* decision, as one commentator has described it, included an accident of history that left the Commission still faced with its difficult new duty:[8]

> Congress immediately responded [to *Phillips*] by passing an act declaring that the 1956 Congress did intend complete exclusion of independent producers, and suggesting rather strongly that the 1938 Congress probably did so as well. Whereupon the President, who strongly supported the 1956 act, vetoed it for reasons unrelated to the merits of the arguments of either the Court or Congress. It has taken the eight years since 1954 for the industry and the FPC to realize that they must mount this unbroken nightmare born of stalemate out of avarice and ride it if they are to move at all.
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> The Commission was as hopeful after 1954 that this new-found, unwanted jurisdiction would vanish as it had once been fearful of

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[7] *See* F.P.C. Ann. Rep. 176-77 (1955); 36 F.P.C. Ann. Rep. 10 (1956); 37 F.P.C. Ann. Rep. 17-18 (1957); 39 F.P.C. Ann. Rep. 12-13 (1959).

[8] Johnson, *Producer Rate Regulation in Natural Gas Certification Proceedings: CATCO in Context*, 62 Colum. L. Rev. 773, 783 (1962); *see also* M. Merrill, The Public's Concern with the Fuel Minerals 104, (1960).

its coming. The record it has amassed that such regulation will not be successful is formidable.

Both economists and lawyers have questioned the soundness of direct producer price regulation,[9] but there is also support for the need for producer regulation of some type[10] and, whatever its merits, the law

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[9] *See, e.g.*, M. Adelman, The Supply and Price of Natural Gas 39 (1962); P. McAvoy, Price Formation in Natural Gas Fields 265 (1962); E. Neuner, The Natural Gas Industry 280-90 (1960) (recommending that contracting behavior rather than price be regulated, in light of a conclusion that industry structure, at least, is competitive); Cram, *Introduction to the Problem of Developing Adequate Supplies of Natural Gas*, in Economics of the Gas Industry 24 (Southwestern Legal Foundation ed. 1962); Kail, The Evolution of Area Gas Pricing and Its Effects on the Natural Gas Industry 18-22, January, 1968 (unpublished thesis in University of Texas Library); Kitch, *Regulation of the Field Market for Natural Gas by the Federal Power Commission*, 11 J. Law & Econ. 243 (1968); *cf* Kitch, *The Permian Basin Area Rate Cases and the Regulatory Determination of Price*, 116 U. Pa. L. Rev. 191, 194-99 (1967) (concluding that area rate regulation resembles wartime price control).

These and other authorities, however, are relevant only to the quasi-legislative function of the Commission in deciding how producers are to be regulated. The decisions of the Supreme Court definitely indicate that the Commission has a responsibility to take the steps necessary to assure that wellhead prices are in the public interest. The Commission does not have to employ the area rate method, or for that matter regulate price directly at all, but it has chosen to fulfill its duty in that manner here.

[10] The Commission concluded that there was an absence of effective competition in wellhead sales. This absence seems to be strongly evidenced by a rapid spiral of price increases over the years from 1950 to 1958, when the price went from less than 9 cents per Mcf to a peak of 24.05 cents. This spiral was apparently caused by three factors. First, the contracting practice in the industry resulted in oligopolistic behavior, because devices such as favored nation, periodic escalation, redetermination, and renegotiation clauses caused any price above in-line levels

since 1954 has imposed the duty of regulation upon the FPC.

From 1954 to 1960, the Commission attempted to discharge its new responsibility in the same way that it regulates pipelines, on a company-by-company basis, setting the rates of each producer according to his costs of service. This method, however, required the Commission to repeat lengthy hearing procedures for each independent operator in the nation. It consequently led to a breakdown in the administrative process,[11] a result that is easy to understand in view of the cumbersome nature even of the single consolidated cases with which we are faced here. The Commission gravitated toward lax approval of price increases. But in 1960, the

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to trigger other price rises. (These contract terms are defined in the Supreme Court's *Permian* opinion, 390 U.S. at 765, 88 S. Ct. at 1358, n. 46.) Second, the producers were able to assert market power even though the market for sales to large pipelines appears at first glance to be oligopolistic, because the pipelines typically needed large blocks of reserves at times not of their own choosing. Finally, the bargaining motivation of pipelines themselves was diluted because pipelines resold in a relatively inelastic market and hence could pass price increases on to consumers. The Commission chose to believe this evidence rather than to focus on concentration ratios, leadership turnovers, or conditions of entry, and it appears to have been justified in so doing. 4 Joint Appendix at 530d-34d (Commission's Opinion).

At the same time, there seems to be general agreement that the market is at least structurally competitive. The Supreme Court in *Permian* described producers as "intensively competitive." 390 U.S. at 757, 88 S. Ct. at 1354. See also P. McAvoy, *supra* note 9, at 7; E. Neuner, *supra* note 9, at 178-204, 280-281; M. Adelman, The Supply and Price of Natural Gas 39 (1962).

[11] *See* J. Landis, Report on Regulatory Agencies to the President-Elect 54 (printed for the use of the Senate Comm. on the Judiciary, 86th Cong., 2d Sess., 1960).

Supreme Court's *CATCO*[12] decision reversed an FPC certification order and directed the Commission to take steps to keep prices "in line." The Commission temporarily responded to this mandate by the "in-line" pricing policy, which stated that the Commission would not approve new certificates providing for gas sales at prices higher than the prevailing rate in the area, and by the "guideline" doctrine, which gave notice that the Commission would not give advance approval to price increases above certain area maxima.[13] Price increases above these guidelines thus subjected the producers to the possibility of refund obligations.

Also in 1960, the Commission began work on a more thorough solution to the problem with the first area rate proceeding, which covered the Permian Basin area of New Mexico and the Texas Panhandle. In subsequent years, the Commission simultaneously had examiners hold hearings on four other areas, of which the area involved in the instant case was one.

A. *The Permian Basin Area Rate Cases*

In *Permian*,[14] the first area rate case, the FPC set

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[12] *Atlantic Ref'g Co. v. FPC*, 1959, 360 U.S. 378, 79 S. Ct. 1246, 3 L.Ed.2d 1312 (known as the *CATCO* case). The Court urged the Commission to disallow or condition new certifications "where the proposed price is not in keeping with the public interest because it is out of line or ... might result in a triggering of general price rises or an increase in the applicant's existing rates ...."

[13] These matters were set out in the FPC's *Statement of General Policy* No. 61-1, 1960, 24 F.P.C. 818.

[14] *Permian Basin Area Rate Proceeding*, 1965, 34 F.P.C. 159, *affirmed in part and reversed in part sub. nom. Skelly Oil Co. v. FPC*, 10th Cir. 1967, 375 F.2d 6, *affirmed in full, in re Permian Basin Area Rate Cases*, 1968, 390 U.S. 747, 88 S. Ct. 1344, 20 L.Ed.2d 312.

maximum and minimum rates for an entire gas producing area on an industrywide basis. It did so by examining costs and setting a rate of return for the area's gas producing industry as a whole. It engaged in a degree of economic experimentation by creating a double-tiered pricing arrangement: The maximum price for "new" gas, gas not yet under contract of interstate sale by the cutoff date of January 1, 1961,[15] was set higher than that for "old" gas in order to stimulate exploration.[16] Old gas was priced on a cost-recovery basis on the theory that a price incentive would not encourage development of gas that had already been sold. Having set these maxima, the Commission froze them for two-and-one-half years by imposing a moratorium on price increases in excess of the ceilings as set. It stated that extraordinary circumstances would induce it to allow petitions for relief from the ceilings

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[15]This date was chosen for three reasons. First, it was the most convenient date following 1960, the year of most data for old gas. Secondly, the in-line and guideline policies had been established in 1960. Thirdly, this date reflected the Commission's estimate of the time at which the industry acquired the capability to drill "directionally," i.e., to explore specifically for gas rather than finding gas as a by-product of the search for oil. 34 F.P.C. at 189. This directionality hypothesis is a major basis of area rate regulation as the Commission has implemented it, because multi-price regulation depends upon the function of greater prices to elicit gas exploration. The hypothesis is not without its critics. *See Foster Associates Report*, December 18, 1969, at 9-10.

[16]The new gas ceiling was 16.5 cents per thousand cubic feet (Mcf) in Texas or 15.5 cents per Mcf in New Mexico, and the old gas ceiling was 14.5 cents per Mcf in Texas or 13.5 cents per Mcf in New Mexico. The difference reflected the fact that the Texas price included state taxes while the New Mexico price did not. Casinghead gas was priced at old gas ceilings irrespective of its vintage. The Commission also set a minimum price of 9 cents per Mcf.

but made it clear that the moratorium would not be lightly disregarded.

The Commission's decision was appealed to the Tenth Circuit. That court sustained the Commission's power to regulate producers by setting industrywide rates and imposing moratoriums on increases, but remanded the case to the Commission because it found that the Commission had failed to include required findings as to the consequences of its order on the gas industry or to specify with sufficient exactness the circumstances under which special relief from maximum rates would be granted. The Tenth Circuit's decision, in turn, was reviewed by the Supreme Court, which reversed the Circuit and affirmed the Commission in full. The Supreme Court's *Permian* opinion is thus the star by which we must do most of our steering in this case.

In *Permian*, the Supreme Court made several different types of determinations. First, it concluded that the Commission had the authority, under the Constitution and Natural Gas Act, to set industrywide rates and to impose ancillary regulations, such as moratoriums, necessary to make area proceedings work. Secondly, it sustained the Commission's use of the cost method for pricing, its determination of rate of return, and its double rate structure; or, in other words, it approved the components of the rates as set. Thirdly, it approved the overall effect of the rates, holding that Commission findings supported by substantial evidence indicated that the rates would produce adequate aggregate revenue, would generate sufficient growth, and would not create unjust results on individual producers. This approval of "overall effect" findings reflects a

somewhat charitable interpretation of the Commission's work,[17] one that the Court emphasized was warranted because the Commission was at an experimental stage in a new and difficult undertaking. At the same time, the Court apparently agreed with the Tenth Circuit that the paucity of findings as to the consequences of the order was a major deficiency, because it stated that it expected the Commission to do better in future proceedings.

The *Permian* decision thus indicates that a reviewing court must look to both individual components and overall effect of rates set by the Commission, but that the Commission has broad discretion that is not to be ineffectuated by either theoretical disagreement with its methods or by discovery of inadequacies that are caused mainly by the difficulty of the regulatory undertaking. The Commission is to be affirmed if it has followed the correct legal standards and acted on the basis of substantial evidence, and under any fair interpretation of *Permian* it appears that the legal standards themselves are to be construed liberally when applied to a regulatory effort still in the experimental stage. This "experiment" doctrine, together with the substantial evidence rule, is background for our consideration of most of the issues presented on this appeal.

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[17]The Commission made no assessment of the effect of its prices on supply, demand, reserves, or industry structure. The Supreme Court advised that in future cases the Commission should state more "fully and carefully ... its assessment of the consequences of its orders for the character and future development of the industry." 390 U.S. at 792, 88 S. Ct. at 1373.

B. *The Southern Louisiana Area Rate Cases*

All parties are in agreement that Southern Louisiana is the most important gas-producing area in the country. The FPC has defined this area to include all parts of the state south of the thirty-first parallel, together with all offshore territory[18] in the federal domain that would be bounded by the Louisiana borders extended into the Gulf. At present, Southern Louisiana accounts for approximately one-third of the nation's gas production, and its untapped, unproven reserves, particularly those in the offshore portion, are among the nation's most promising. Natural gas, in turn, is the nation's most important, or at least most widely used, source of energy.[19]

Proceedings to set rates for this area began in 1961, nearly a decade ago. The initial hearing ended in 1965 and the examiner rendered his decision in 1966, after the Commission had written its *Permian* opinion. The Commission rendered its final decision in 1968, a few months after the Supreme Court had decided *Permian*. The decision was modified in some respects by a new opinion on rehearing in early 1969.

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[18] "Offshore" gas production, in this opinion, means production outside state boundaries and thus not subject to state severance taxes, i.e., that in the federal domain.

[19] In 1965, the year the record in this case closed, Bureau of Mines figures attributed 35.7 percent of this nation's total energy production to natural gas. The percentage has been steadily increasing over the years. For 1968, the producers quote a figure of 37.5 percent. Brief for Amerada Group at Appendix B-2.

(1) The Rate Structure

The Commission repeated in Southern Louisiana the multiple rate structure it had introduced in *Permian*, this time setting three different price levels for what it denominated as first, second, and third vintage gas. For first vintage gas, that for which contracts of interstate sale had been made prior to 1961, the Commission set a ceiling of 18.5 cents per thousand cubic feet (Mcf). For second vintage gas, that contracted for between the dates of January 1, 1961, and October 1, 1968,[20] it set a ceiling of 19.5 cents. For third vintage gas, that contracted for after October 1, 1968, it set a ceiling of 20 cents. For offshore gas in the federal domain, which is not subject to the Louisiana severance tax, it set prices for each of the three vintages 1.5 cents below onshore levels. For casinghead gas (gas produced in association with oil), the Commission set prices equal to those of first vintage gas irrespective of the vintage. The Commission found that casinghead gas is discovered largely as a product of the search for oil and exploration for it thus could not be encouraged by the higher prices of second and third vintage gas.

The price structure thus established is summarized in the following chart:

Vintage or Type	*Onshore Price*	*Offshore Price*
First vintage	18.5 cents	17.0 cents
Second vintage	19.5 cents	18.0 cents
Third vintage	20.0 cents	18.5 cents
Casinghead	18.5 cents	17.0 cents

[20] The reasons for the establishment of the January 1, 1961 date were similar to those for its establishment in Permian. *See* note 15 *supra*. The October 1, 1968 date marked the approximate end of these proceedings before the Commission.

The prices for new, nonassociated gas are higher than those for all other vintages and well types, because the Commission determined, as it has in *Permian*, that price should be used to elicit the appropriate level of future exploration and development. In order to enforce these ceilings for gas of first and second vintages that had already been produced and consumed, the Commission ordered substantial refunds of moneys collected in excess of its maximum rates.[21]

(2) The Commission's Cost Determinations

Although the rate structure contains some noncost elements, it is closely tied to cost computations.[22] The Commission used two different methods of computing costs, one of which it applied to old gas (first and second vintage) and the other to new gas (third vintage). New gas is priced to allow for the appropriate level of exploration, and the Commission determined that exploration for gas was and should be undertaken on a nationwide basis, so new gas costs are based upon present costs for the entire nation. Old gas is priced so as to allow recovery of costs actually incurred in its production, and therefore the costs used are historical area costs, i.e., those of the Southern Louisiana area itself during the periods covered by the earlier vintages.

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[21] The Commission ruled that, by further order, it would require refunds of the difference between the amounts collected and amounts that could have been received under the applicable area rate (or the amounts that would have been received under firm certificates or settlement rates if those rates were higher than the area rate).

[22] The Commission relied upon published data, testimony, and questionnaires filled out by producers to collect its raw cost data.

The bulk of the Commission's opinion is devoted to computation and explanation of costs. Included in its total is an allowance for a rate of return of 12 percent, which is the same rate that was set and approved in *Permian*. We have set out the other elements of the Commission's cost findings in tabular form in the footnote below.[22]

(3) Moratoriums on Increases in Excess of Maximum Rates

In establishing rate ceiling freezes, the Commission went substantially farther than it had hazarded in its earlier *Permian* decision. It imposed a moratorium of a little more than five years — lasting until January 1, 1974 — on rate increases for third vintage gas in excess of the maximum prices it set. For first and second vintages, the moratoriums were to last indefinitely. These moratoriums mean that the vintage ceilings are to remain in effect throughout their duration, and that

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[22] All figures given are unit costs, in cents per Mcf. The grouping of flowing gas costs is different from that for new gas; the flowing gas E&D computation, for example, contains some

Item	*New Gas*	*Flowing Gas*
Exploration and Development	4.14	4.17
Production Operating Expense	2.70	1.93
Liquid Credit	(3.30)	—
Depletion, Depreciation, Amortization	4.04	3.19
Return on Investment	5.33	5.17
Return on Working Capital	0.35	—
Regulatory Expense	0.15	0.17
Royalty	2.24	—
Area Gathering	0.51	0.51
Production Tax	2.30	2.30
TOTAL	18.80	18.36

producers cannot collect prices in excess of maximum rates even subject to refund.

However, the Commission provided, as it had in *Permian*, that it would always be open to a petition to lift moratoriums for individual producers or to modify area rates as a whole in the event that changed circumstances made either of these steps advisable. Moreover, it quoted language of the Supreme Court stating that it would be "desirable" if the Commission specified more precisely the conditions for relief and, in response to this language, gave examples of changes that would cause it to lift moratoriums or change rates.[24]

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[24] Area rates "will be modified if a showing is made that unit costs — reflecting amounts spent and reserves found — have increased to such an extent that an increase in area rates is required." As to individual producers, the Commission recognized that it was avoiding "precise specification of circumstances that would justify special relief," but stated that:

> "However, certain principles have been established. Overall high cost of service of an individual producer is not a ground for relief. The fact that current revenue from a particular well is less than the costs of continuing its production is a ground for relief. The fact that a producer can obtain a higher price elsewhere is not a ground for relief. Certain producers have already requested price relief, contending that unusually high pressure, great volume, concentrated delivery points, delivery of large quantities at one point, unusually high gas quality, unusually good deliverability and the availability of gas for swing purposes justify an increased price. We have determined that none of these, nor all of them together, are grounds for price relief."

These and other statements of the Commission, taken together, probably constitute as specific an exposition of circumstances for relief as can be expected at this stage in area regulation.

In addition to setting maximum rates, ordering refunds, and imposing moratoriums, the Commission took action along a number of other lines that are of lesser significance in this case.[25]

(4) Commencement of New Proceedings for this Area

On December 15, 1969, shortly before oral argument in the instant case was heard, the Commission instituted new proceedings to reconsider all major actions it had taken in the orders before us. In other words, the Commission is now holding hearings that will probably result in substantial modifications of the rates set in this case. In its order initiating the proceedings, the Commission advised the parties that it would receive evidence concerning "the adequacy of gas supply and adequacy of service to consumers, the demand for gas, the cause of a gas shortage, if any, the effect of price on gas supply and demand, and other relevant economic evidence, together with data as to the current, nationwide cost of finding and producing nonassociated gas."[26] Similar considerations

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[25]The Commission established a system of quality discounts that were to be used in adjusting maximum rates, outlawed certain types of flexible pricing clauses resulting in increases over ceilings, created special exempt types of producer sales, exempted "small" producers from certain requirements, and determined that minimum rates need not be established.

[26]*Order, Enlarging Investigation and Proposed Rulemaking*, 1969, ____ F.P.C. ____ [No. AR69-1; slip opinion dated December 15, 1969, at 3]. The Commission indicated that "we desire to have this proceeding expedited in every way possible." Prehearing was set for January 27, 1970.

The Commission had already set part of the offshore territory for reconsideration in its opinion on rehearing. The Order

are to be taken up with respect to old gas, and the moratoriums are to be re-examined.

Since the new proceeding may affect rates for all vintages, and since the data the Commission has called for reflects the possibility of a radical change in approach, this Court was naturally concerned about the effect of the new proceeding upon our disposition of the instant appeal. At oral argument, however, all parties agreed that the proceeding should have no effect upon our review, and we now agree.[27] Above all, we do not view the new proceeding as a "confession of error" by the Commission as the producers have invited us to do. It is true that the Commission now recognizes the possibility of a serious supply deficiency and that it did not recognize this possibility in the decision we are reviewing.[28] This awareness, however, and the Commission's prompt action upon it, militate in favor of affirmance rather than reversal. The new proceeding is evidence of the Commission's ability to adapt the regulatory process to changing circumstances. We conclude that the indications that there is a supply deficiency should be examined in this second-round proceeding before the Commission. The

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of December 15 enlarged that proceeding to include the entire area.

[27]The maximum rates that the Commission has set, in addition to the moratoria, are to remain in effect throughout the new proceeding, which may last for years. Moreover, it was never contemplated that there should be a single area proceeding setting rates once and for all; rather the Commission has always made it clear that it intended to review the rates it had set whenever the circumstances made it advisable to do so. *See* note 24 *supra*.

[28]*See* section III D *infra*.

evidence that there is a deficiency seems very strong, but given the Commission's actions we are convinced that it can now deal with the problem as effectively as present circumstances will allow.

At this point, we proceed into analysis of the specific arguments made by the consumer interests on the one hand and by the producers on the other.

II. THE CONSUMER ARGUMENTS

There are three main arguments advanced by the intervening parties on this appeal. First, these parties contend that the Commission overstated certain of its calculated costs. Second, they argue that the record does not furnish substantial evidence to justify a rate of return as high as 12 percent. Thirdly, they argue that the Commission committed reversible error in adding noncost factors to a rate based upon the costs (including return) it had computed. We take up the consumer issues in this order.

A. *The Commission's Cost Determination*

The consumer interests contend that the Commission overstated production operating expense for old gas by excluding casinghead gas, which is cheaper to produce, from consideration.[29] They also attack the

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[29] About fourteen percent of gas produced in Southern Louisiana is casinghead, and the Commission states that "we are well aware that its indicated cost is substantially below that of gas-well gas." The ADG has calculated the difference in cost at about 3 cents. Assuming this figure to be correct (which we cannot really assume because joint costing of oil and gas is

Commission's allocation of exploration and development costs between oil and casinghead gas where oil and gas are discovered together.[30] They attack the

judgmental), the inclusion of casinghead gas into the computation of costs for the first vintage would result in a total decrease in first-vintage price from 18.5 cents to approximately 18.3 cents by our calculation, or a difference of just over one percent. Especially in view of the cost-computation structure as a whole, which has frequently involved the Commission in the approximations of interpreting joint costs, we consider this amount de minimis, even conceding its accuracy. But our rejection of this argument is based upon more fundamental considerations. The assignment of costs to products jointly produced, as are oil and casinghead gas, is not an exact undertaking, and we think the Commission has acted on the basis of substantial evidence, particularly since it has set a rate structure under which casinghead gas of all vintages is assigned the lowest price, that of first vintage. The Supreme Court approved a similar calculation in *Permian*. *Cf.* ICC, Bureau of Accounts, Statement No. 4-54, Explanation of Rail Cost Finding Procedures and Principles Relating to the Use of Costs, Ch. 1, pt. 4 (1954).

[30] It seems clear that oil, which is more valuable than a volume of gas of the same heat content, should bear more of the exploration and development cost. The Commission, as its first step in assigning these costs, determined a unit by which gas and oil could be compared: the amount of each that is required to produce a Btu of heat. It then determined what it called the "economic factor," which is the number of gas units that equaled in value a unit of oil. By strict computation, the Commission arrived at an economic factor of 4.0. This factor would have indicated the assignment of four times as much of the cost to oil as to gas. It then adjusted this factor to 3.5, however, to allow for the fact that revenues from flowing gas should be expensed against *present* drilling, which is undergoing a continuing shift away from searches directed solely at discovering oil toward searches directed at finding gas. We think it is reasonable for current revenues from flowing gas to be compared with current expenses in exploration for new gas. Thus the Commission adopted an allocation that assigned higher costs to exploration for gas than would its straight calculation, but it justified this modification by a qualitative finding that is based upon substantial evidence.

allowance for "plant gathering," or short-distance pipelining from wellhead to the producer's plant for the purpose of extracting salable liquids.[31] Finally, they contend that the Commission understated the credit for salable liquids extracted from the gas stream, which is subtracted from gas production costs.[32] We consider each of these matters in footnotes appended hereto.

On the whole, we find each of these cost criticisms defective for one or both of two reasons. First, they deal mainly with amounts that are small compared to the accuracy that can be expected of computations of

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[31] The consumer interests argue that these plant gathering costs should rather be assigned to those salable liquids, since they are incurred in producing them. On rehearing, the Commission indicated that the allowance might have been overstated slightly, but that ". . . the entire allowance is only 0.33 cents. The amount of possible excesses does not seem worth the burden of further hearings on other allocation methods." The Commission indicated that a significant portion of the 0.33 cents is chargeable against gas because part of the liquid revenues do not go to the producers at all but rather are paid to the leasehold, reducing its cost. Another significant part is also chargeable to gas, because transportation to a plant is usually done in furtherance not only of liquid extraction but also of moving the gas stream itself closer to the centralized point at which it must be delivered. Therefore, we agree with the Commission that possible excesses in the 0.33 cent figure, which is itself less than 2 percent of the total price, would be de minimis, and we hold that the plant gathering allowance is based upon substantial evidence.

[32] They argue that the credit of 3.5 cents for lease-extracted liquids and that of 0.50 cents for plant-extracted liquids is too low. The Commission calculated the lease liquid credit at 4.18 cents, but it reduced this figure to allow for a trend of decreasing revenues from these liquids. It reduced the plant liquids credit from a calculated 0.75 cent to 0.50 cent to allow for a duplication of credits elsewhere. These actions are supported by substantial evidence.

this nature.[33] Secondly, and more importantly, they place too much emphasis upon abstract manipulation of figures. There is nothing in the substantial evidence rule that prevents the Commission from performing calculations based upon necessarily imperfect assumptions when it explains the reasons for those assumptions. Likewise, there is nothing to prevent it from re-examining and adjusting the result of a calculation based upon imperfect premises, provided it justifies its actions on the basis of the record.[34]

B. *The Rate of Return*

Next, the consumer interests argue that the Commission acted arbitrarily, discriminatorily, or without substantial evidence in establishing a rate of return as high as 12 percent. The argument appears to be based upon the fact that the "special circumstances"

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[33]A generous reduction for all four cost criticisms considered here, if *all* of them were accepted, would certainly not exceed 1.5 cents. Commissioner Carver, on the other hand, indicates reasonable changes that could result in an *increase* of 4.0 cents, if all were adopted, in his dissent to the opinion on rehearing. *See* note 85 *infra*. The inherent, unavoidably approximate nature of rate regulation under legislative standards has been noted by both economists and courts, including the Supreme Court in *Permian*, 390 U.S. at 790, 88 S. Ct. at 1372 n. 59; *see also* J. Bonbright, Principles of Public Utility Rates 27, 67 (1960). Of course, the inaccuracy of pricing techniques is one reason why the FPC is required separately to determine the consequences of its pricing actions. *See* section III (D) *infra*.

[34]Provided it meets other requirements of law, the Commission may employ any "formula or combination of formulas" it finds appropriate. It may "make the pragmatic adjustments which may be called for by the circumstances." *FPC v. Natural Gas Pipeline Co.*, 1942, 315 U.S. 575, 586, 62 S. Ct. 736, 743, 86 L.Ed. 1037; *see also Permian*, 390 U.S. at 800, 88 S. Ct. at 1377.

cited in *Permian* as justification for the 12 percent rate of return — namely, that the gas was frequently of inferior quality so that the return was likely to be lowered — are not present in Southern Louisiana, where nearly all of the gas is of high quality.[35] Alternatively, it is based upon the contention that the Commission did not comply with the "comparable earnings" test of *FPC v. Hope Natural Gas Co.*, 1944, 320 U.S. 591, 64 S. Ct. 281, 88 L. Ed. 333.

We are not impressed with the argument that circumstances present in *Permian* are not present here, because even if, *arguendo*, we concede the relevance of this proposition, we find circumstances not present in *Permian* that are important here. The Southern Louisiana area is a crucially important gas-producing region in which new exploration needs especially to be encouraged. A great portion of the discoverable gas in the area is far offshore. The finding that new reserves of gas can be found without a significant rise in unit costs is premised in part upon the increasing use of new technology,[36] and the need to adapt produc-

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[35] We recognize possible validity in the consumers' argument that Commission reliance on such matters as hurricanes in fixing a 12 percent rate of return for Southern Louisiana is misplaced. It might have been more appropriate to treat these matters as above-the-line costs (reflected, for example, in insurance premiums) rather than as a risk upon which one obtains return. *Permian*, however, indicates that arguments of this type should be addressed to the discretion of the Commission. 390 U.S. at 811, 88 S. Ct. at 1383. Furthermore, we do not need to rely heavily upon these factors, because the Commission has advanced other justifications for the rate of return.

[36] *See* 3 Joint Appendix, pt. 1, at 239d (Initial Decision). The Commission relied heavily upon the examiner's findings in fixing the rate of return.

tion to a constantly changing technology involves risks that definitely justify a high rate of return even for an industry taken as a whole.[37] Furthermore, the possibility of a supply deficiency, a possibility that has become stronger during the pendency of this review, strengthens our conviction that substantial evidence supports a return as high as 12 percent.

Nor do we find any merit to the argument that the Commission failed to apply the comparable earnings test correctly.[38] In discussing the required rate of return, the parties varied in their recommendations from 9-9.5 percent (presented by consumer interests) to 20-24 percent (presented by the Hunt Oil group of producers).[39] The Commission considered all evidence,

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[37] *See* G. Stigler, Capital and Rates of Return in Manufacturing Industries 90-91 (1963); *cf.* J. Galbraith, The New Industrial State (1967).

[38] We note at the outset that the Commission is not required to compute rate of return on the basis of the comparable earnings test. The Permian decision states that "other tests might properly have been employed." (The Court cites with apparent approval the examiner's discussion of rate of return in this very case, the Southern Louisiana proceeding). 390 U.S. at 805, 88 S. Ct. at 1380 & n. 1; *see also* J. Bonbright, *supra*, note 33, at 240-83. However, we review the Commission's decision under the comparable earnings test because that is the standard it evidently followed.

The test has been formulated as follows: Return should be "equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties." *Bluefield Water Works & Improvement Co. v. PSC*, 1923, 262 U.S. 679, 692, 43 S. Ct. 675, 679, 67 L.Ed. 1176; *FPC v. Hope Natural Gas Co.*, 320 U.S. at 603, 64 S. Ct. at 288.

[39] The Amerada group of producers argued for a 16-18 percent rate of return. The FPC Staff recommended 9.5 percent and asserted that 12 percent "can well be considered as in excess

then made its determination by abstracting the rate of return earned by a group of unintegrated gas producers over the years 1958 to 1962.[40] It adjusted this figure slightly, in ways that it thought appropriate, to allow for possible inadequacies in its data base.[41] The Commission chose unintegrated gas producers because it quite reasonably decided that these companies would be most representative of the risks the industry was facing, and it chose the period 1958 to 1962 because that was the most recent for which the record furnished reliable data. In light of the standard of review, which is whether the Commission's findings are supported by substantial evidence, we are particularly unimpressed with the argument of one intervening party that the FPC "erroneously failed to consider relevant evidence." There is substantial evidence to support a rate of return as high as 12 percent, and the Commission properly applied the test expressed in *Hope*.[42]

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of the upper limit of the range of reasonableness." *See* 3 Joint Appendix, pt. 1, at 164d, 173d, 185d, n. 1. (Initial Decision).

[40] *See* 4 Joint Appendix, pt. 1, at 567d-74d (Commission's Opinion).

[41] "[W]e recognize that the limited available data on non-integrated companies refers to a few unusually successful producers. Also, earnings-book ratios of integrated companies deserve to be given some weight." *Id.* at 573d.

[42] The comparable earnings standard is a general one, encompassing several indicia of earnings and requiring both ability to attract capital and a fair return on equity. *Williams v. Washington Metropolitan Area Transit Comm.*, D. C. Cir. 1968, 415 F.2d 922, 933. Certain types of computation are unacceptable, *see Id* at 970 & n. 294, but the Commission has broad power to select the evidence upon which it should rely. We find that the Commission was obviously attempting to apply the comparable earnings test. The sole questions it struggled with were what companies' risks were comparable and what the earnings of those companies were. Its choice of evidence is reviewable under the substantial evidence standard.

C. *Noncost Elements in the Computed Prices*

As was previously mentioned, the Commission added small noncost elements to several of its maximum rates. It increased the second vintage ceiling by 0.7 cent over cost, the third vintage ceiling by 1.2 cents, and the ceiling on all offshore gas by an additional 0.8 cent.[43] The consumer interests attack these increments vigorously, describing them as "cushions," "bonuses," "lagniappes," and other labels implying that the producers are the object of open, unvarnished FPC generosity. They cite authority purportedly to the effect that a public utility cannot add noncost elements to a cost-based rate, relying heavily upon the recent *en banc* decision of the Court of Appeals for the District of Columbia Circuit in *Williams v. Washington Metro-*

[43] We are singularly unimpressed with the characterization of this offshore factor as a "phantom tax" by both the MDG and the New York Commission. These parties begin by stating that the computed cost difference between offshore and onshore is 2.3 cents (the amount of the Louisiana severance tax), go on to show that the Commission's ceiling for offshore is only 1.5 cents, and from this conclude that the Commission has allowed 0.8 cent for "phantom" taxes inapplicable to offshore, which is outside Louisiana's taxing jurisdiction. The conclusion is the baldest of sophistry, for the 0.8 cent allowance has nothing to do with the Louisiana tax. It is a noncost element intentionally added by the Commission, and we consider it as such.

It is only fair to add, however, that this sophistry was made possible, if not plausible, by the Commission's failure to label noncost factors specifically and to justify them in a way clearly independent of costs. It is also a product of conflicting implications in the Commission's findings. *See* sections IV A (1), (4) *infra*. The raising of phantom issues such as this one wastefully consumes the efforts of a reviewing court.

politan Area Transit Commission, D.C. Cir. 1968, 415 F.2d 922.[44]

The *Williams* case is part of a heavy volume of litigation concerning regulation of mass transit in the District of Columbia. The excellent opinion of the court of appeals deals with a number of issues that are remanded to the Transit Commission. The issue that relates to our case concerns a "cushion" in the computed rate of return, constituting the amount the Transit Commission thought was "required to enable [the D.C. Transit System, Inc.] to maintain a sufficient surplus to cover contingencies and to assure the financial stability of Transit."[45] The court concluded that a fair and reasonable rate of return would itself include

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[44]The main thrust of the MDG argument is that the Commission failed to include adequate justification for the noncost factors in its opinion, an argument with which we would be inclined to agree were it not for the newness of area regulation. *See Colorado-Wyoming Gas Co. v. FPC*, 1945, 324 U. S. 626, 65 S. Ct. 850, 89 L.Ed. 1235; *United States v. Carolina Carriers Corp.*, 1940, 31 U.S. 475, 62 S. Ct. 722, 86 L. Ed. 971. This is a procedural issue crucial to appellate review. *See* notes 110-11 *infra* and accompanying text.

[45]All other issues remanded to the Transit Commission were so treated because of a lack of required findings, but the court disapproved completely the cushion in the rate of return. The Transit Commission had included the amount because of the possibility that its "conservative" cost and revenue findings might be inaccurate. It expressed a preference for adding a cushion above costs to cover this possibility rather than allowing for it in its cost findings because adjustment in cost findings would be compounded by the addition of return. The court did not dispute this proposition, which indeed is indisputable, but stated that "[n]otwithstanding the uncertainty that attends all prophesy, a regulatory agency is bound to make its forecasts as accurate as it possibly can, and a reviewing court is entitled to assume that it has done so."

assurance of financial stability and that under the circumstances the return added to costs was all that the Transit Commission should have allowed.

Even if we were to construe this case as broadly disapproving noncost elements, the application to the sprawling, wildcatting gas producing industry of principles developed in regulating bus and telephone companies would require major adjustments.[46] But this is not the extent of our disagreement with the argument advanced by these intervening parties. We do not understand the law of industry regulation, including the Williams case,[47] to prohibit noncost elements that are

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[46] The gas industry is different from metropolitan transit in that it requires a constant infusion of entrepreneurship of the highest order if even basic public needs are to be satisfied. The D.C. Transit System will continue to operate even if the return its investors expect in a given year is poor, because it is a true public utility subject to the orders of the Transit Commission. Its service may not be of the best quality if rates are too low, or, more importantly, its owners may have a Constitutional claim against the Government, but the public will not be irreparably injured. On the other hand, we count upon persons who carefully weigh investment risks for our supply of natural gas. We think the Commission here, having calculated the dangers involved in allowing the gas supply to lapse, and the probabilities that its estimates might be too low, is justified in having added the small noncost factors it thought were necessary. It found that it needed to do so to protect the public interest and not to assure any rights of gas producers. However, as the *Williams* case indicates, the use of noncost factors to allow for possible inaccuracies is not favored. Inaccuracy, if that is *really* the concern (and not higher costs), can result in a windfall to producers as easily as in a loss. *See* note 47 *infra*. We approve the use of noncost factors for this purpose under the facts of this case only.

[47] *Williams* is distinguishable from our case in several respects; it is so clearly so, in fact, that we feel justified in concluding that it is based not on disapproval of noncost increments but

based upon appropriate grounds. In *Permian*, the Supreme Court unequivocally stated that the FPC is not bound by the sum of cost and return even if it adopts costs as the primary basis of its calculations.[48] The most persuasive reason for this rule is that cost pricing is circular. Past production has taken place at a given level; if a regulatory body fixes prospective prices at the cost of that production, it may be freezing the level of production, too.[49] We think that the need for dramatically increased production from Southern Louisiana justifies the noncost factors added here, and that the FPC has power to include noncost elements that reflect its assessment of the need to use price as a tool to influence such economic relations. These are propositions that apply generally to regulation of utilities and quasi-utilities.

The Commission explained the reasons for its noncost additions as follows. The 0.8 cent cushion added to offshore gas prices was a reflection of the growing importance that offshore will have to assume if future development of reserves is to meet demand and also

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upon disapproval of egregiously inattentive regulation. The cushion had been added ostensibly to allow for inaccuracies in cost computations, but the court found that as the computations had been made any inaccuracies would lie on the side of generosity to the Transit Company. Moreover, in earlier years regulation by the Transit Commission had allowed, in reality, a return of equity of 21 percent for the Company, as versus a "comparable earnings" return computed at 7.5-8.7 percent. The Transit Commission had made no findings as to comparable earnings. 415 F.2d at 936-37, 973-74.

[48] 390 U.S. at 815, 88 S. Ct. at 1385 & nn. 97-99

[49] This argument is widely accepted; indeed, it was cited with approval in *Permian*. *See Id.* at n. 99 and authorities therein cited.

of the unavoidable uncertainty of cost data concerning offshore, since offshore drilling in deep water is a relatively new undertaking.[50] The noncost increments on second and third vintage gas prices were cushions against the possible adverse effects of cost changes or inaccuracies during a lengthy price ceiling freeze.[51] The Commission found that price stability over a longer period of time would be more in the public interest than a rate that was lower by a few percentage points, and we conclude that the length of these proceedings by itself furnishes substantial evidence to support this finding. We have no hestitation, moreover, in holding that this purpose is an appropriate one for inclusion of noncost elements in a cost-based price.[52] However, the Commission's fulfillment of its procedural duty of making findings leaves much to be desired.[53] In view of the Commission's failure to relate

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[50] These considerations are in apparent conflict with the Commission's finding that "it has not been demonstrated that the unit cost of gas is greater offshore than onshore." 4 Joint Appendix, pt. 1, at 622d. The Commission could have reconciled this conflict by indicating, for example, that it had *some* reason for thinking costs might be higher, or that the newness of the undertaking and the consequent unavailability of cost data was itself a risk justifying a higher return.

[51] This finding should have been discussed in light of the Commission's finding that costs were unlikely to rise. Evidently the Commission recognized some probability that costs would rise slightly, and the amount of the cushion is tied to this probability — but the Commission has not exposed its reasoning.

[52] *Cf.* 390 U.S. at 815, 88 S. Ct. 1385, n. 98.

[53] The Supreme Court affirmed in *Permian*, however, while being forced to read the Commission's mind even more than we are. The Commission there had said that "no [noncost] adjustments are required in the Permian Basin." 34 F.P.C. at 207. But the Supreme Court found that the Commission had actually used four separate types of noncost factors and had justified each. 390 U.S. at 815, 88 S. Ct. at 1385 n. 98.

its noncost additions to specific probabilities concerning influences upon supply or to make any showing as to the demand they are needed to meet,[54] we are hesitant to sustain the use of these increments and do so only because the Commission is still in the experimental stages of area regulation. We shall have more to say about these deficiencies below. At this point, we emphasize the fact that the Commission has justified the noncost factors by reference to considerations that ostensibly affect not private but broad public interests.[55]

We conclude that the arguments advanced by these intervening parties are without merit.

III. THE PRODUCER ARGUMENTS

The producers present the following four major arguments to this Court: First, that the moratoriums are unlawful; secondly, that the Commission failed to follow the comparable earnings test in assessing a

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[54] Noncost factors will often in the ultimate analysis relate to these market variables, although there are other possible justifications for them. Where noncost elements are used to relate supply and demand, the level of each and the relationship between them must be explored. Here, adequate supply, even though the Commission has not examined it, is obviously a major consideration lurking behind the noncost additions, expressed in the Commission's frequent allusions to the "importance" of the Southern Louisiana area. A finding as to "importance," without any identification of or discussion of the specific characteristic of the region that is important, is of little benefit to a reviewing court.

[55] *See* note 46 *supra*; *cf.* note 47 *supra*.

rate of return as low as 12 percent; thirdly, that the Commission's cost determinations are unlawful or erroneous; and finally, that the Commission failed to make the findings necessary to relate supply, demand and price according to the "end result" test of the *Hope* and *Permian* cases. We take up the issues in this order, with particular emphasis on the supply problem presented in the last argument.

A. *The Moratorium Provisions*

The producers' attack on the moratoriums is based upon the fifth amendment to the Constitution, the Natural Gas Act, the Administrative Procedure Act, and factual issues pertaining to the case. In *Permian*, as we have noted, the Supreme Court affirmed the Commission's imposition of a two-and-one-half year moratorium on rate filings in excess of ceilings. However, it did so only for the limited circumstances before it, and left the question of longer moratorium legality almost completely open:

> We cannot, given the apparent stability of production costs, the Commission's relative inexperience with area regulation, and the administrative burdens of concurrent area proceedings, hold that this arrangement was impermissible. We need not attempt to prescribe the limitations of the Commission's authority under §§ 5 and 16 to impose moratoria upon § 4(d) filings; in particular, we intimate no views on the propriety of moratoria created

> in circumstances of changing costs. These and other difficult issues may more properly await both clarification of the Commission's intentions and the necessities of the particular circumstances. *We hold only that this relatively brief moratorium did not, in the circumstances here presented, exceed or abuse the Commission's authority.*[56]

Considering this language, we think it incumbent upon this Court to meet the producers' arguments against these lengthier moratoriums as undecided questions.

At the outset, we find little merit to the producers' Constitutional complaints. The possibility that they may be deprived of property without due process of law is speculative and remote, and if such a deprivation occurs both courts and Commission will stand ready to remedy it. For the present, we find no such deprivation. Economic regulation under the commerce power, affecting an industry generally, is not a taking of property if the value of property is thereby reduced or business risks increased.[57] The producers have a

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[56] 390 U.S. at 782, 88 S. Ct. at 1367 (emphasis added).

[57] No constitutional objection arises from the imposition of maximum prices merely because "high cost operators may be more seriously affected * * * than others," *Bowles v. Willingham*, *supra*, 321 U. S. at 518, 64 S. Ct., at 649, or because the value of regulated property is reduced as a consequence of regulation. *FPC v. Hope Natural Gas Co.*, *supra*, 320 U. S. at 601, 64 St. Ct. at 281; Permian, 390 U.S. at 769, 88 S. Ct. at 1361. *See also West Coast Hotel Co. v. Parrish*, 1937, 300 U.S. 3791, 57 S. Ct. 478, 81 L. Ed. 703; *Nebbia v. New York*; 1934, 291 U.S. 502, 54 S. Ct. 505, 78 L. Ed. 940; *Munn v. Illinois*, 1877, 94 U.S. 113, 24 L. Ed. 77.

fifth amendment right not to be forced to sell or surrender their property without either due process or just compensation, but the Constitution gives them no right to raise prices irrespective of Commission approval in the absence of a deprivation of property.

Similarly, we find no merit to the producers' argument under the Administrative Procedure Act.[58]

The moratorium provisions were validly promulgated after adequate notice when the rate proceeding began.[59] With these considerations disposed of, we turn to the more difficult questions presented under the Natural Gas Act.

The procedure contemplated by Section 4 of the Natural Gas Act[60] is designed to protect sellers from the

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[58] 5 U.S.C. § 550 *et seq.* (1967).

[59] The argument is based upon the following two contentions: first, that sections 7 and 8 of the APA, read in conjunction with section 4 of the Natural Gas Act, require rate orders to be made upon formal hearing and not upon the "informal" procedures established here, and second, that the issuance of the moratorium order was not preceded by the public notice required by section 4(b) and other sections of the APA. The answer to the first argument is that the instant proceeding is the rate order required to comply with sections 7 and 8; we do not think these sections apply to the decision whether to grant individual relief after the just and reasonable rates have been set. This is the clear import of the *Permian* approval of group regulation. *See* 390 U.S. at 744, 88 S.Ct. at 1364, distinguishing *Bowles v. Willingham, supra*. The second argument likewise has no merit. The Commission published notice regarding the commencement of area proceedings, and the notice in our view was sufficient to inform all parties that ancillary regulations would be considered. 26 Fed. Reg. 4296 (1960).

[60] 15 U.S.C. § 717c (1963).

possibility of property deprivation through confiscatory rates that might not be increased quickly enough under ordinary hearing procedures. Section 4 provides that "[u]nless the Commission otherwise orders," a natural gas company must file a notice of rate increase thirty days before the effective date if it increases its rate unilaterally. The Commission may suspend the rate increase for a period of no more than five months, during which time it must begin hearings to determine whether the increased rate is just and reasonable. If the hearings are not completed by the end of five months, the gas company may collect the increased rate subject to refund. Limited encroachments upon this procedure have been permitted the Commission when they were necessary to effectuation of other requirements of the Act, the most notable being the Supreme Court's approval of the *Permian* moratorium.[61]

In considering the legality of moratorium provisions generally, we begin with the proposition that under section 5(a)[62] of the Act the Commission may determine rates and prescribe the "rule, regulation, prac-

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[61] The Court in *Permian* also approved Commission orders of indefinite duration prohibiting increases above maximum rates brought about by flexible pricing clauses. 390 U.S. at 782-83, 88 S. Ct. at 1368-69. *See also Atlantic Ref'g Co. v. FPC*, 1959, 360 U.S. 378, 79 S. Ct. 1246, 3 L. Ed. 2d 1312 (approving prospective ceilings on price in section 7 proceedings); *cf. United Gas Improvement Co. v. Callery Properties, Inc.*, 1965, 382 U.S. 22, 86 S.Ct. 360, 15 L. Ed. 2d 284.

[62] 15 U.S.C. § 717d(1963). Moreover, section 16 of the Act, 15 U.S.C. § 717o (1963), gives the Commission power "to perform any and

tice, or contract to be thereafter observed." Thus section 4 does not give producers an "invincible right to raise prices subject only to a six-month delay and refund liability."[63] The section provides only that "a change *cannot* be made without the proper notice to the Commission; it does not say under what circumstances a change *can* be made."[64] Thus the Commission is not required to follow the procedure that section 4 contemplates for each individual producer. Moreover, once a just and reasonable rate has been established, the Commission has a responsibility to prevent rate increases in excess of that rate without changes in circumstances. The Supreme Court recognized this Commission responsibility with regard to gas producers in the *Phillips* and *CATCO* cases, and it recognized that the Natural Gas Act contemplates FPC power to carry out its purposes realistically.[65] If the Commission is to discharge its duty of regulating production, it must use the area rate ceiling method or some analogous industrywide approach. It cannot regulate individual producers simply because the strain that approach would put upon its time and resources would be prohibitive. And moratoriums are necessary if the area regulation method is to work at all. Uni-

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all acts, and to prescribe, issue, make, amend, and rescind such orders, rules, and regulations as it may find necessary or appropriate to carry out the provisions of this chapter."

[63] *United Gas Improvement Co. v. Callery Properties, Inc.*, 1965, 382 U.S. 223, 232, 86 S. Ct. 360, 365, 15 L.Ed. 284 (separate opinion of Mr. Justice Harlan).

[64] *United Gas Pipeline Co. v. Mobile Gas Service Corp.*, 1956, 350 U.S. 332, 339, 76 S.Ct. 373, 378, 100 L.Ed. 373.

[65] *See* notes 5-13 *supra* and accompanying text.

lateral producer price increases in excess of the ceilings would otherwise involve the Commission immediately in the task of determining whether each increased rate was just and reasonable in terms of the financial position of each individual producer, which is precisely the problem the Commission faced before area regulation and so badly needs to avoid.[66] By putting a ceiling on rates in such a manner that the ceiling is likely to cover the just and reasonable rate for a number of years, and imposing a moratorium that lasts no longer than the period that the ceilings are likely to be adequate the Commission can discharge its regulatory responsibilities with minimum encroachment on the salutary procedures contemplated by section 4.[67]

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[66] Certain of the producers urge that §§ 4 and 5 must in combination be understood to preclude moratoria upon filings under § 4(d). They assert that the period of effectiveness of a rate determination under § 5(a) is limited by § 4(e); they reason that § 4(d) creates an unrestricted right to file rate changes, and that such changes may, under § 4(e), be suspended for a period no longer than five months. If this construction were accepted, it would follow that area proceedings would terminate in rate limitations that could be disregarded by producers five months after their promulgation. The result, as the Commission observed, would be that "the conclusion of one area proceeding would only signal the beginning of the next, and just and reasonable rates for consumers would always be one area proceeding away." 34 F.P.C., at 228. 390 U.S. at 781, 88 S. Ct. a 1367. The same conditions, of course, are present here.

[67] It is to be emphasized that the moratorium provisions do not prohibit increased rate filings. They prohibit rate filings *in excess of the ceilings*. These ceilings are the maximum prices that the Commission feels can be considered just and reasonable. The Commission has added noncost increments to the rates that present the greatest danger of inadequacy, and it

It remains to consider whether the moratoriums actually imposed here are factually supportable — whether they are in fact reasonable and based upon substantial evidence. Our discussion above indicates that these factors should be examined in light of two considerations: First, whether the moratoriums as ordered are necessary to effective area regulation, and second, whether substantial evidence indicates that they are unlikely to result in inadequate ceilings later in their duration.[88] If moratoriums may be approved in principle, we have little difficulty in approving a moratorium of five years under the circumstances here. In *Permian*, the two-and-one-half year moratorium was exhausted before the Commission's order was finally affirmed by the Supreme Court.[89] To prescribe a moratorium of five years on a finding that stable prices for the area are desirable, we think, is within the discretion of the Commission, especially when the proceeding to establish those rates has been longer than five years and appellate review promises to lengthen the period substantially. A five-year mora-

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has provided avenues of extraordinary relief, both industry-wide and on an individual-producer basis, whereby the moratoriums may be lifted. We do not think that the moratorium provisions, which are necessary to the area regulation process, "write section 4 out of the Act," as the producers have contended.

[88] These two considerations can also be extracted from the following *Permian* language: "We cannot, given the apparent stability of production costs, the Commission's relative inexperience with area regulation, and the administrative burden of concurrent area proceedings, hold that this [moratorium] arrangement was impermissible." 390 U.S. at 781, 88 S. Ct. at 1367.

[89] Moreover, the Tenth Circuit had stayed the moratorium order and it consequently had no effect at all throughout its duration. 390 U.S. at 777, 88 S.Ct. at 1365.

torium in this case is also justified by the Commission's observance of recent trends and its conclusion that costs are remarkably stable or even slightly declining. This finding, together with the noncost factors, makes it reasonable to conclude that the rates will not in the future become unfairly low *provided* they are set at just and reasonable levels now. Of course, the practical effect of our approval of this moratorium is minimal, however, since the Commission is reviewing all moratoriums in the new proceedings, and supply problems, if they exist, will require quick remedies.

We have greater difficulty with the indefinite moratoriums imposed upon first-and-second-vintage prices. Our trouble is based not only upon the fear that these provisions could some day result in inadequate ceilings — even though the Commission has made findings based upon substantial evidence that cost increases in the *near* future are unlikely — but also upon our apprehension that they are in excess of what is reasonably necessary for area regulation to function. Consequently, although we have determined that the Commission should be affirmed in full, we limit our approval of the indefinite moratoriums to the circumstances present on this appeal. We stress the fact that the Commission is holding hearings now to determine whether the moratoriums should be modified, and that the result of this determination should be reviewed without reference to approval on this appeal.[70]

[70] Specifically, considerations relating to the law of the case should be accorded only limited significance, since experience with area regulation may increase to such an extent as to constitute a change in circumstances.

We also emphasize that the experimental nature of producer regulation makes us as yet reluctant to reverse the Commission on a matter which has little present impact[71] and which can be corrected, if experience shows it erroneous, in the future. These considerations, together with the Commission's findings and its demonstrated willingness to use the avenues of relief it has provided, elicit our qualified affirmance of the moratorium provisions.

B. *The Rate of Return*

The producers attack the rate of return mainly on the ground that the Commission failed to follow properly the comparable earnings test expressed in *Bluefield Water Works & Improvements Corp. v. PSC*, 1923, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176, and *FPC v. Hope Natural Gas Co.*, 1944, 320 U.S. 591, 64 S.Ct. 281, 88 L.Ed. 333.[71A] They particularly claim that the period chosen by the Commission was unrepresentative, and present persuasive evidence to that effect.[72]

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[71]Theoretically speaking, the indefinite nature of the moratorium will assert itself only in the future. Practically, it will have some effect on industry expectations and hence industry conduct. But since the new proceedings before the Commission create expectations that ceilings may be changed, we consider the present effect of the indefinite moratorium to be minimal.

[71A]We reiterate, as the producers seem to lose sight of the fact, that the Commission is not *required* to compute return by the comparable earnings test. *See* note 38 *supra*.

[72]The producers' most easily comprehended presentation is a graph over the years 1947 to 1968 of rates of return they considered comparable. The 1958-1962 period chosen by the Commission is decidedly a dip in the curve, reflecting a recession during these years. Also, the producers attack the Commission's choice of companies to compare and failure to consider evidence showing a rise in earnings since 1963. Persuasive evidence, however,

The trouble is that we have already determined, in our discussion of the consumer-interest contentions concerning this issue, that there is also persuasive evidence to support the Commission's findings and the Commission followed proper legal standards. Reliance upon returns earned by unintegrated producers during the latest period for which the Commission felt it had reliable data was appropriate, in light of the widely divergent evidence presented in this case. Producer contentions to the contrary amount to an attack on the Commission's choice as to which evidence to believe.

C. *The Commission's Cost Determinations*

Producer attacks on the cost computations are many and varied. Most are cognizable under the substantial evidence standard. At the outset, however, we are met with the contention that the very method of cost pricing is too imprecise to be used in regulating the gas-producing industry. We must reject this contention. In a situation wherein the Commission has found that market imperfections tend to force price to ex-

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supports the Commission's action, and we are not engaged in finding these facts anew.

Furthermore, the rate of return even as set may be higher than 12 percent. Noncost factors, if they are viewed as additions to the return — and this is a logical way to view them, since they must go either to pay costs or to increase return — would increase return to 14-16 percent for new gas. Earnings on equity at a 12 percent rate on capital, of course, are higher than 12 percent because they are leveraged by debt; here they amount to about 13.3 percent. Finally, the producers' argument for a 16-18 percent rate of return is defective because it includes early years in which very high returns — well over 20 percent — distort the figure so that it is unreliable for present use.

cessive levels, it would be self-defeating to regulate on the basis of market forces, and the most logical alternative is usually cost pricing. Thus the fact that it cannot be made absolutely precise is not grounds for rejecting cost pricing when market conditions make its use advisable.[73] Indeed, some courts have held that costs *must* be at least the starting point for fixing just and reasonable rates in the gas industry. *E.g., City of Detroit v. FPC,* D.C. Cir. 1955, 230 F.2d 810. Even more persuasive is the fact that the Supreme Court upheld the use of cost pricing on a record similar to ours in its *Permian* decision.

Similarly, the producers make a broad attack on the use of average, rather than individual producer costs. We reject this attack as the Supreme Court rejected it in *Permian.*[74] There is nothing in either the Constitution or the Natural Gas Act that prevents the Commission from adopting price ceilings under which some producers will make more money than others or even under which some producers may be in danger of going out of business. The gas-producing industry, as the producers have pointed out to us, is not a true public utility, and one of its characteristics is the possibility of exit from the market.[75] This being the case, we find from the record that the use of average costs, whether it provides a fair return for all businesses

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[73] Imprecision is, however, one of the reasons for the requirement that a regulatory body reassess its rates in terms of purpose and consequences. *See* section IV A (3) *infra.*

[74] 390 U.S. at 818-20, 88 S.Ct. at 1386-87. *Cf.* 390 U.S. at 829-38, 88 S. Ct. at 1392-97 (dissenting opinion of Mr. Justice Douglas).

[75] *See* 3 Joint Appendix, pt. 1, at 77d (examiner's discussion of testimony and exhibits regarding rates of entry and exit).

or not, is lawful and based upon substantial evidence.[76]

In addition to these arguments, which are considerably weakened by their rejection in *Permian*, the producers have pressed one novel argument of a general nature against the cost determinations. They contend that the use of national costs to fix the price of new gas in this case is not substantial evidence because national data contain elements that seriously distort the costing of gas in Southern Louisiana. The producers' authority of strongest reliance is the Supreme Court's post-*Permian* decision in *Baltimore & Ohio R.R. v. Aberdeen & Rockfish R.R.*, 1968, 396 U.S. 87, 89, S.Ct. 290, ___ L.Ed.2d ___. The case condemns the use in railroad price regulation of average costs for an aggregate region when cost elements from part of the region may distort the calculation.[77] There are several reasons, however, why we find that decision inapplicable to the case before us. In the first place, the use of national figures here is based in part upon findings that these costs are the best available

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[76]A different question would be presented if the persons regulated were prevented in some manner from going out of business even when revenues fell below costs.

[77]The Court held that railroad rates for a route spanning two territories, served by two or more carriers in cooperation, cannot be divided among the carriers on the basis of costs for both territories taken together if the costs of lines in one territory distort the cost findings so derived for lines in the other. In the absence of a finding that there is no distortion, said the Court, the unadjusted costs for either territory or for the whole are not substantial evidence.

index to costs in Southern Louisiana,[78] despite inclusion of areas that are not of the same character as this region.[79] Secondly, the Commission has found that new exploration and development is national in scope. The operation of a particular piece of railroad trackage, on the other hand, is local to the place to be served; the supply of railroad service cannot be moved wherever it can be provided at least expense.[80] We accordingly hold that *Aberdeen & Rockfish* does not modify *Permian* approval of national costing in gas producer regulation and that it does not require reversal in this case.

Next, we must deal with the producers' contention that the Commission relied upon stale, unrepresentative data in making its cost findings. The staleness of the record is a serious problem. It is now 1970, and we are reviewing a case in which the record before the examiner closed in 1965. It is a case setting rates for a fast-growing, changing industry in a changing economy. The full Commission, which rendered its decision in 1968, was able to consider some data covering years as recent at 1966, and even this

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[78] The examiner, after extensive consideration, concluded that Southern Louisiana costs were probably slightly lower than those for the nation. 3 Joint Appendix, pt. 1, at 221d-31d.

[79] The producers contend, for example, that costs for the Hugoton-Anadarko area are significantly lower since reservoirs are shallower and should be excluded. The examiner's overall comparison of Southern Louisiana with national costs, however, is more to the point.

[80] There are limits to the movability of gas exploration, too, since a pipeline "cannot be moved around like a garden hose." *See* E. Neuner, *supra* note 9, at 282; note 101, *infra*; *Staff Report* at 17.

is data that there is reason to expect may already be stale.[81] Staleness of the record, however, is not itself a reason for reversal. *ICC v. Jersey City*, 1944, 322 U.S 503, 514-15, 64 S.Ct. 1129, 1134-35, 88 L.Ed. 1120;[82] *see also United States v. ICC*, 1970, 38 U.S.L.W. 4129, 4137. Much of the problem is attributable to the difficulty of the regulatory undertaking in light of the procedures currently available. Procedures must improve as the experiment of area regulation becomes better understood. Turning to another type of staleness argument, we are not impressed with the producer's complaint that the Commission chose to base some of its findings on older data than the most recent available. These choices were based upon findings as to greater reliability or representativeness of the data used.[83] Moreover, in such cases the Commission did not fail to consider the most recent data in the record, and it adjusted its findings to allow for rising or falling cost trends. Most importantly, it made a finding that costs as a whole during this decade had been remarkably stable (or were even declining slightly) and were likely to remain so, and this finding is based upon substantial evidence.[84]

Having made these determinations, and having inspected the producer's objections to specific cost cal-

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[81] *Compare, e.g.*, 4 Joint Appendix, pt. 1, at 546d (Commission's Opinion, calculating FP ratio at 1.37 for recent years in 1966) *with* Brief for Amerada Group at 17 (indicating FP ratio of approximately 0.62 for 1968, calculated from Bureau of Mines figures).

[82] It is to be noted that the *Permian* case, too, was eight years old when the Supreme Court issued its opinion.

[83] *See, e.g.*, note 72 *supra*.

[84] *See* 4 Joint Appendix, pt. 1, at 666d-76d (Commission's Opinion).

culations, we find that detailed discussion of these calculations would be of little value at this point. The producers point to, and adopt in part, the dissent of Commissioner Carver to the Commission's opinion on rehearing, which raises disturbing criticisms as to nine different types of cost determinations, which, if they had been determined differently, could be aggregated to increase the total by about 4.0 cents.[85] We think this imprecision in cost pricing is completely unavoidable, but the law allows the Commission to use cost pricing nevertheless. Moreover, Commissioner Carver did not present his four-cent increase for general approval, but instead stated that "it is certainly evident that not all of the above adjustments should be accepted." The thrust of the dissent, we think, is that

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[85] The Commissioner's computations produced the following:

Item	*Impact in ¢/Mcf*
22-year depletion period	0.48¢
Time lag of 1.57 years	0.28
Drilling costs — successful well	0.29
Related	
Lease acquisition	0.09
Return allowance	0.43
Unit capitalized outlay	0.31
Exploration and development	1.90
Dry Hole	0.19
Liquids credit	0.25

He added that "I have no idea that all or any of these figures are precisely correct; I think the Commission and its staff has no better idea. . . ." *Id.*

We find the arguments in this dissent to be strong ones, but it is not our task to choose which method we could use. The Commission has followed the cost method in this case, and we cannot reverse its decision here.

We have inspected the Commission's findings as to each of the cost items attacked by the producers with some care. Although we do not discuss each individually in order not to lengthen an already lengthy discussion (*cf.* notes 29-32 *supra*), we find each to be supported by substantial evidence.

the Commission should not have relied upon cost calculations floating in a vacuum but should have reviewed its computations in light of supply, demand, and other market forces (a proposition with which we definitely agree), and should have given greater attention to the settlement agreement proposed by several of the parties.[86] We reject the contention that cost pricing is so imprecise as to make its use unlawful and hold that the Commission's findings here are based upon substantial evidence. We proceed next to the important issues of supply and market, which we consider to be the key to the producer's attacks on the imprecision of cost pricing.

D. *Commission Findings as to the Consequences of Its Orders on the Gas Industry and Market: The Supply Problem*

(1) Commission Findings and the Legal Standards

We have reserved the most serious issue in this case for last. The producers contend that the Commission

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[86] Joint Appendix, pt. 1, at 1000d (dissenting opinion). The Commissioner stated that he could not decide this case on the basis of *any* cost record.

In light of the imprecision of costs, broad support for the settlement, evidence that the market has at least a procompetitive structure, and cumbersome nature of price regulation, it may be that the settlement arguments advanced by Commissioner Carver are persuasive. In this case, the settlement is championed by the producers, and before the Commission it was supported by gas distributors (whom we classify as representing consumer interests) accounting for over 87 percent of delivery volume. *Id.* at 1001d. Widespread use of the settlement technique would result in negotiation pitting market forces against each other on an aggregate scale, overseen by the Commission."

improperly failed to consider projected consumer demand for gas in relation to supply and that it thus violated the "end result" test of the *Hope* and *Bluefield* cases. These contentions are closely related to the argument that the Commission's cost determinations are imprecise, for the "end result" test is simply that whatever method a regulatory body uses, the result of its effects must be demonstrably in keeping with the purposes of regulation.[87] The FPC must evaluate each rate set against policies as broad as the Natural Gas Act itself. *Colorado Interstate Gas Co. v. FPC*, 324 U.S. 581, 605, 65 S.Ct. 829, 840, 89 L.Ed. 1206. The purposes of the Act encompass not only

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[87]It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the Act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important.
FPC v. Hope Natural Gas Co., *supra*, 320 U.S. at 602, 64 S. Ct. at 288.

In keeping with this statement, we would not have such serious misgivings about affirming this order, with all the infirmities of the Commission's pricing methods, if the Commission had adequately considered its result in a larger context. A reviewing court, which is not privy to the Commission's special knowledge, is not likely to be able to make the assessment of results that the Commission could. We are troubled greatly by the fall in the FP ratio, for example, and cannot know whether it is so serious as to warrant some immediate, extraordinary action by this Court. The point is that without adequate consideration by the Commission of ultimate market impact, even slight troublesome facts assume fearful proportions. In this case, the producers, as well as the FPC Staff, predict a severe gas shortage, with disastrous effects on consumers and the economy alike. This Court has little inclination to join the Commission in presiding over such a result.

reasonably low rates but maintenance of adequate service for the consumer, and the latter objective is the reason for the *Hope* requirement that rates must be "sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital."[88]

The Supreme Court, while affirming the Commission in *Permian*, made it clear that adequate findings along these lines would be required in the future: "Judicial review of the Commission's orders will therefore function accurately and efficaciously only if the Commission indicates fully and carefully the methods by which, and the purposes for which, it has chosen to act, as well as its assessment of the consequences of its orders for the character and future development of the industry."[89]

In this case, as in *Permian*, the Commission refused to make findings as to overall demand for gas either in the nation or from the Southern Louisiana area, and it likewise declined to estimate future supply under its order. Similarly, the Commission refused to make findings as to the advisable level of the RP (reserves to production) or FP (findings to production) ratios, or to assess the consequences of its or-

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[88]Indeed, the *Hope* case interprets the policy of the Act as involving both consumer interests and the autonomous interests of the industry. The Commission must "balance ... the investor and consumer interests." 320 U.S. at 603, 64 S. Ct. at 288.

[89]390 U.S. at 792, 88 S. Ct. at 1373.

ders on these ratios.[80] The closest that the Commission came to direct exploration of these problems is in its discussion of the FPC Staff's Econometric Studies, a lengthy set of calculations based upon empirical economic relations and designed to show how price, supply and demand are interrelated in the national economy. The Commission rejected these studies as unreliable.[81] Having rejected this quantitative approach, how-

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[80] The Commission's most specific finding as to demand appears to be that "there seems no doubt that natural gas will be a major and vital source of energy for many years to come." 4 Joint Appendix, pt. 1, at 664d. This assessment is practically useless and should be made with far greater specificity in future proceedings.

The Commission also stated that "[w]e must reject the findings-to-production and reserves-to production ratios as not substantially indicative for fixing ceiling rates in this proceeding." 4 Joint Appendix, pt. 1, at 529d. *But see* note 122 *infra*. The ratios need not have been directly considered in price computation, but the effect of the price on them should have been assessed.

[81] We agree that the econometric studies were fatally defective, for the reasons set out in the examiner's decision. 3 Joint Appendix, pt. 1, at 380d-408d. Their most basic and serious defect is their tacit underlying hypothesis that demand will call forth sufficient exploration to meet it regardless of cost or profit considerations. The examiner quoted the following argument advanced by Amerada:

> . . . Thus, Staff's projections indicate that total exploratory wells in 1970 will be 8,900 at the 17¢ assumed national average ceiling price and with competing fuel prices remaining proportional. A 14¢ ceiling price would yield 10,130 exploratory wells while a 20¢ ceiling price indicates only 8,380 would be drilled. Turning to the same year and under the same assumptions, Staff's alternative model suggests 624 successful gas exploratory wells will be drilled in 1970 if prices remain at current levels, with 742 at a 21¢ ceiling and 581 at a 22¢ ceiling. Even more wells are predicted to be drilled at lower ceiling prices such as 10¢ per Mcf. However, there is nothing in Staff's economic hypothesis or in the exploratory equations utilized which requires that we stop at the 10¢ assumed ceiling

ever, the Commission failed to approach supply and demand in either a semi-quantitative or qualitative way.

Instead, the Commission made less extensive findings as to the effect of its rates on the industry. It found, for example, that the costs it had calculated were likely to remain stable for some time to come. This finding is supported by substantial evidence, since costs had, in the past, shown a pattern of stability or even a slight downward trend, and all components of cost, except possibly production operating expense, were shown unlikely to change significantly.[92] Also, the Commission found that the rate

price. Thus, the Staff equation at a 2¢ ceiling price would predict that the industry would in 1970 drill 268,310 exploratory wells (Ex. 156, p. 9).

This, of course, is more exploratory wells than have been drilled in total since 1940. The reason for such absurd results is that Staff's exploratory equation fails to consider any cost related to exploration or production; it continues to blindly forecast increases in production due to the supposed stimulating effect of low price on demand." (Amerada reply brief, pp. 21-22)

Although we approve the Commission's action in rejecting these studies, we do not approve of its failure to consider supply in relation to demand. It should be pointed out that in doing so the Commission has itself committed an error similar to Staff's. The error is not so serious as that of utterly failing to consider the profit incentive, but the Commission *has* assumed, without supporting findings, that the cost-plus-return price will be *sufficiently* profitable to elicit supply to meet demand, whatever the level of demand. This is circular pricing. If demand rises and cannot be satisfied out of reservoirs that are easily enough found to allow the entrepreneur his profit, demand will not be satisfied. Having found that rigorous mathematical equations could not solve this problem, the Commission should have confronted it in a semiquantitative or qualitative way.

[92] *See* 4 Joint Appendix, pt. 1, at 667d-73d.

of return it had set was commensurate with that of industries with similar risks, and it concluded that consequently the industry should be able to attract capital sufficient to satisfy demand.[93] Its overall assessment of the revenues that would be produced under its rates and their effect was as follows:

Annual revenue reduction from	
Gas-well and oil-well gas under pre-1961 contracts	$ 41.4 million
Oil-well gas under post-1960 contracts	$ 0.1 million
Gas-well gas under subsequent contracts	$ 7.5 million
Total	$ 49.0 million

> We also estimate that under the maximum rates here allowed . . . [annual revenues] would amount to $519 million, or about 18.4 cents per Mcf (not including sizeable revenues from condensates and entrained liquids) and that these revenues will rise steadily . . . .
>
> In our judgment, the revenues allowed . . . should foster an active exploratory program consistent with both the financial needs of the industry and the protection of the public interest.[94]

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[93] We do not think reviewing courts should accept such conclusionary findings as this after the "experiment" justification for affirmance no longer applies. The Commission should have looked directly to sources and availability of capital.

[94] Joint Appendix, pt. 1, at 683d. The finding as to the total expected revenue is commendably specific. However, it is useless

The Commission did not explain the reasoning by which it arrived at this conclusion. Finally, the Commission examined the place of natural gas in the economy as a whole and concluded that although other energy sources are growing in importance, "there seems no doubt that natural gas will be a major and vital source of energy for many years to come and nothing should be done at this time which would prevent the exploration and development necessary to make available this clean, convenient, economical and increasingly popular energy source."[95]

(2) The Current Supply Situation

Despite the Commission's optimistic conclusion, the circumstances that have developed since its decision indicate a possibility; indeed perhaps a certainty, that the supply of gas is dangerously low. A serious shortage, in fact, may already be unavoidable because present conditions may render any remedial action ineffective in light of the lag time between remedy and result. Thus the producers point out to us that the FP ratio, for the first time since World War II, shows that findings have declined below production. In other words, the gas industry in 1968 took more gas out of the ground than it discovered. Together with a growing production curve, this fact is alarming, especially since it is likely that the FP ratio will remain below 1.0 for the foreseeable future.[96] The producers also

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to persons not privy to the Commission's expertise, because the Commission has simply stated a figure floating in a vacuum and concluded without more that this figure will "foster an active exploratory program."

[95] Joint Appendix, pt. 1, at 664d.

[96] *See* FPC, Staff Report on National Gas Supply and Demand 11 (1969) (projecting FP ratio as declining steadily from 0.92 in 1969 to 0.73 in 1975).

contend that the RP ratio is dangerously low, and despite the frequency with which this argument has been effectively categorized as a "cry of wolf,"[97] we are concerned about it here. A majority of the Commissioners on the FPC have alluded in public speeches to the seriousness of the supply problem.[98]

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[97]The New York Commission states that "In every major appeal, the producers' 'major issue' has been the claim that if the producer position were rejected, the result would be a widespread shortage of natural gas . . . ." Reply Brief for New York Public Service Commission at 14. In *Permian*, the Supreme Court noted that one party had characterized the producers' concern for the RP ratio as a "neurotic preoccupation." 390 U.S. at 817, 88 S. Ct. at 1386 n. 103. The producers there had argued that the ratio should be kept at a minimum of 20 to 1, and there was substantial evidence that lower ratios were acceptable. The Court evaluated the significance of these ratios as follows:

> Nothing in the record establishes as proper or even minimal any particular ratio. We do not suggest, nor did the Commission, that the Commission should not continuously assess the level and success of exploration, or that the relationship between reserves and production is not a useful bench-mark of the industry's future. We hold only that the Commission here permissibly discounted the producers' reliance upon this relationship to establish the inadequacy of its rate structure.

[98]*See* Address by Chairman White, A Regulator Looks at the Electric and Gas Industries with a Sidelong Glance at Investment Analysis, before the Financial Analysts Federation, May 16, 1969; Address by Commissioner O'Connor, Prospects for Future Gas Supplies, before the National Ass'n of Regulatory Utility Commissioners, October 7, 1969; Address by Commissioner Brooke, before the Independent Natural Gas Ass'n of America, September 9, 1969; Address by Commissioner Bagge, The FPC and Area Pricing: The Need for Re-examination, before the Gas Industry Seminar at Oklahoma State University, May 13, 1969.

We take judicial notice of the concerns these speeches express. *See* C. McCormick, Evidence § 328 at 704 (1954). (We

And an even more persuasive indication of the immediacy of the problem is the recent FPC Staff *Report on National Gas Supply and Demand*, issued October 1, 1969, which concludes that "only a few years remain before demand will outrun supply."[99]

The Staff Report is, at least from appearances, a careful, considered document. The record in this case does disclose instances in which Staff has been egregiously, in error,[100] but we think there is something to its supply and demand report. The report is based upon quantitative projections of demand and several indicia of supply — precisely the kind of "assessment of consequences" that we find lacking in the Commission's decision here. Demands for Southern Louisiana's gas, according to the Staff report, will be double its 1969 level in 1975. The FP ratio will remain below 1.0. The RP ratio will decline below 11 by 1973 even under the best of circumstances, and there is nothing that can be done at this time to maintain the ratio at its present level. The report further argues, and argues persuasively, that the inevitable decline in the RP ratio will probably cause regional supply deficiencies to come into existence as early as 1973.[101] And

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do not, of course, take judicial notice of the specific facts they state for the purpose of resolving contested issues. *Id.*)

[99] *Staff Report* at 1.

[100] *See* note 91 *supra* (Econometric studies).

[101] A critical ratio will ultimately be reached in each area below which the RP ratio cannot be decreased, meaning that at that point production cannot be increased without reserve additions, according to the Staff Report. But reserve levels at any given time are determined by previous levels of exploration, and there is a lag before new exploration results in addition of usable reserves. Staff has calculated the critical RP ratio for Southern Louisiana at approximately 8. It has projected the

aside from probable short-term deficiencies that cannot be prevented, Staff concludes that "[a] major new government-industry program is needed immediately to insure the continued growth of natural gas service during the next decade."[102]

The projection in the Report focuses on the next five years, and Staff announces its intention to update it at five-year intervals, but some predictions are made for longer terms. It is not too early to begin considering the effect of present gas use on our resources in the far future.[103] The Staff Report, if it is correct,

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future of the RP ratio and determined that the critical level will be reached about 1973 or 1974 under a "business as usual" regulatory program. At that time production, having kept up with demand, will not be capable of being increased, and deficiencies will come about which production from other areas will not be able to pick up because of lack of delivery lines and because they will be approaching the critical ratio. *See Staff Report* at 14-17.

[102] *Staff Report* at 4.

[103] The supply of natural gas is, of course, ultimately limited not by exploration but by the amount of recoverable reserves. The Potential Gas Committee, a group of experts from all segments of the gas industry, has recently estimated the total recoverable reserves in and offshore to the United States and Alaska at 1,227 trillion cubic feet, divided into probable supply, possible supply, and speculative supply. Consumption in 1968 was 19 trillion cubic feet. Address by Commissioner O'Connor, *supra* note 98. In other words, production for something over sixty years would exhaust this estimated supply even at present levels. The situation is aggravated by (1) growing demand and (2) increasing difficulty of finding reserves as one goes from probable to speculative supply areas. *See* Terry, Future Life of the Natural Gas Industry, in Economics of the Gas Industry 275 (Southwest Legal Foundation ed. 1962). Of course, supply from other countries, pipelined in or brought in as liquid (LNG,), synthetic gas and other sources, could have an impact on this problem. Staff Report at 47-76. Farsighted gas regulation, however, would take into account

shows that unavoidable gas supply problems in the near future, the middle future, and the far future are not only possible but probable.[104] This prospect needs only to be considered against the huge and growing importance of natural gas in this nation's energy mix.

(3) Disposition of the Supply Problem at this Stage of Review

The possibility of severe gas shortages, together with the Commission's failure to make thorough findings on the matter, present by far the most important and most difficult question in this case. We have serious misgivings about affirming the Commission. Nonetheless, after having considered all factors we find relevant, we have determined that affirmance is the best course.

First, reversal or even a limited remand would serve little purpose in this case. We think our opinion, and indeed probably the circumstances themselves, will notify the Commission that it cannot in the future set prices by cost considered in a vacuum. The Commission has itself recognized the possibility that its prior orders were inadequate and has set new proceedings that will consider precisely the questions troubling us and may well modify the entire scheme here reviewed. If there is a need to do so, the Com-

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the rational development of this depletable supply, perhaps even to the extent of having that development influence present area rates. *See* note 121 *infra*.

[104] Staff Report at 19 (graph showing supply, demand, and deficiency projections into the late 1980's).

mission may, and has in part, set aside the present order pending further determination. The long and the short of it is that the Federal Power Commission is vested with the responsibility to make certain that the gas industry serves the public interest, and insofar as we can tell it would perform this function equally competently whether we affirmed this case or reversed it. Indeed, if immediate action is called for here, we think a reversal in this case would unduly interfere with the Commission's performance.

Secondly, we can understand the circumstances that led to the Commission's order, and we are not sure that its making thorough findings in the instant case would have avoided entirely the possibilities that Staff has raised. It is certain, for example, that Staff did not communicate these possibilities to the Commission in any coherent way during the consideration of this case; in fact, Staff appears to have made major errors that would have aggravated the situation except for the Commission's refusal to adopt them.[105] Furthermore, the producers, who are possessed of most of the information essential to effective regulation, have not always actually advanced the goal of effective regulation. All in all, indications that supply deficiencies are probable were not clearly so clear at the time of the decision we are reviewing as Staff makes them seem now. Certainly, the Commission is now as aware of this new information as we are. We therefore think it appropriate, rather than inspecting the Commission's de-

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[105] *See* notes 39, 91 *supra* (concerning econometric studies and rate of return).

cision by hindsight, to allow the Commission to proceed with its new hearings with the benefit of the new information that has been presented to us.

Thirdly, this Court cannot itself evaluate the supply situation or determine what action is needed. We do not know whether the information that has reached us is correct or not. Staff states that, "For purposes of this report we have accepted at face value all industry-furnished data. Our conclusions must therefore be weighed against the assumed accuracy of our data base."[106] It also states that it is setting forth only one of several possible forecasts, albeit it is the one it thinks most probable. Clearly, even if immediate, decisive action is needed, this Court cannot take it. Since we have concluded that the Commission is on the right course now, our best course is to keep within the proper sphere of a reviewing court. The point is that the probability of shortage based on new evidence is not before us for review; all that is before us is the legal adequacy, and not the wisdom, of the Commission's orders.

Finally, and most importantly, in light of *Permian* we think we are required to hold that the Commission's orders in this case are procedurally and substantively adequate under the law. Whether they are ultimately wise is a question to be presented not to this Court but to the Commission. In *Permian*, the Supreme Court affirmed the Commission on a record similar to the one we have before us. It reversed

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[106]Staff Report at 2-3.

the Tenth Circuit, which expressed concerns similar to ours. It is true that in sustaining the Commission, the Court indicated that it expected the Commission to perform its procedural duty of fact finding better in the future. We do not think that a great deal of improvement can be expected over the Commission's *Permian* opinion, however, since hearings in this case had been going on for seven years when the Supreme Court issued its opinion, and the decision here came out a few months after that decision. Proceedings over those seven years inevitably caused the Commission to focus on certain issues to the exclusion of others. In other words, we think that the "experiment" doctrine of *Permian* is still relevant to our evaluation of the legal sufficiency of the Commission's efforts. It should be added that the Commission has responded to the difficult task mandated by the *Phillips* and *CATCO* cases by creating a regulatory procedure that is at least potentially workable, and that in itself is no mean accomplishment.[107]

At the same time, we emphasize that our affirmance should not be taken in any manner as a judgment that the supply problem is not serious enough to require immediate modification of the order herein sustained. We do not reach this question. It is possible that the Commission may find it advisable to make such an immediate modification or that it might set aside the order affirmed here. The Commission has power to take these actions if it finds them appropriate. We can only reiterate our concern over what we consider to

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[107] *See* notes 5-13 *supra*.

be strong evidence that a supply deficiency is imminent, but we think it especially important, at this uncertain time, to resist hasty action and to place some degree of faith in the body to which Congress has entrusted this question.

IV. CONCLUSIONS AND RECOMMENDATIONS

Throughout this discussion, we have been forced to navigate between the Scylla of disobeying *Permian* and the Charybdis of condoning inadequate Commission findings in the face of a possible supply deficiency. We think *Permian* requires affirmance. However, we are disturbed by what we consider to be excessive reliance by the Commission upon the mere *result* of the *Permian* decision.[108] This reliance shows that the Commission has not read *Permian* carefully enough. At numerous points in its opinion, the Supreme Court indicated that it was affirming the Commission on an inadequate record and that it was doing so only because area rate proceedings were new. Here, we think it appropriate to place a greater emphasis on the ways in which we hope the Commission will do better.

The most serious problem, as we have said, is that of possible supply deficiencies, together with the cor-

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[108] As we have previously stated, reliance on *Permian* is justified by the "experiment doctrine." The case had been commenced seven years before *Permian* and the Commission's opinion issued five months after *Permian*. Nevertheless, we think some deference to the expectations of the Supreme Court would have been appropriate, if only to show the Commission's awareness of them, especially in light of the advance warning given by the opinion of the Tenth Circuit.

relative failure of the Commission to consider supply and demand. Our discussion of the issues should be understood in light of this order of importance.

A. *Needed Improvements in the Commission's Presentation of Cases for Review*

(1) Identification and Explanation of Rate Components

As the Supreme Court stated in *Permian*, "we would expect that the Commission will hereafter indicate more precisely the method by which it intends to proceed."[109] In computing costs, as we have stated, we think the Commission has adequately explained its findings. It should be more precise, however, about its noncost elements and the reasons for their use. Noncost elements influencing a cost-based rate should be clearly labelled as such and their basis explained as specifically as possible.[110] Non-cost factors may be used to influence market variables such as supply and demand, to create price stability, to influence industry structure, to simplify a rate schedule, and for many

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[109] 390 U.S. at 800, 88 S. Ct. at 1377. The Supreme Court had difficulties similar to ours with noncost elements. 390 U.S. at 815, 88 S.Ct. at 1385 n. 97. The Court charitably observed that "the Commission's exposition of these questions might have been more carefully drawn."

[110] It should not be possible, for example, for a party on appeal to characterize a noncost element as a "phantom" tax allowance. The characterization in this case is absurd, but the possibility for it arose as a result of the Commission's timid treatment of the matter. *See* note 43 *supra*. It would be far better if both courts and parties got down immediately to the real issue — whether the noncost element can be justified.

other purposes,[111] but only if they are clearly identified and explained. If the Commission approaches these matters forthrightly, it can expect a reviewing court to give great deference to its expertise, even when it ventures into new territory.

(2) Assessment of Consequences upon the Industry.

We have already cited the Supreme Court's language calling for more specific assessment of consequences upon the industry. This assessment should encompass the following three variables, among others: (1) The character and number of individual enterprises that will remain when the order has had its effect (i.e., industry structure); (2) the capital actually available to the industry as a whole; and (3) most importantly, the industry's probable conduct and performance as a result of the order.

Maintenance of a healthy industry structure is an important FPC responsibility.[112] We have heard producer complaints that the use of unexamined average costs will prevent large segments of the industry from recouping investment and will lead to greater con-

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[111] *See* 390 U.S. at 815, 88 S. Ct. at 1385, nn. 97-99 and authorities therein cited.

[112] The natural gas industry, even though regulated, is subject to antitrust legislation, and the policies of that legislation should not conflict with the impact of the rate order. If a significant decline in the number of competitors appeared probable, it would be a matter of concern in antitrust law even in a large, fragmented market. *See United States v. Von's Grocery Co.*, 1966, 384 U.S. 270, 86 S. Ct. 1478, 16 L.Ed.2d 555.

centration in the industry, particularly since small producers as a class are subject to higher risks than large ones. We do not know whether this dire prediction represents truth or an overactive imagination, and more importantly we cannot tell from the Commission's opinion whether it knows.[113] The Commission could have cleared up the problem by a few simple findings that should have been a part of its determination — findings as to the approximate number of producers, if any, who might abandon business as a result of the rates as set and as to the subsequent degree of concentration in the industry. If concentration is increasing, the increase should be justified in terms of the public interest.

As to the crucial issue of sources for adequate financing, the Commission's findings, and for that matter the evidence, are almost nonexistent. The Commission has made only conclusionary statements to the effect that capital from outside sources will be available at the rate it has set. This is a tenuous basis for our affirmance. Another court reviewing a regula-

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[113] In this connection, the Commission might well consider the recommendations of Mr. Justice Douglas in *Permian* rather than emphasizing, as it has in its brief, that his was a "solitary" dissent. The use of average costs without examination of results troubled him and troubles us. We agree, as did Justice Douglas, that the Commission may certainly *use* average costs, but it should make some finding of effects so that it will be sure that their use is in the public interest. The majority opinion in *Permian* is authority for the proposition that the Commission does not have to make the assessment Justice Douglas would have required, but the making of that assessment would by no means be incompatible with the majority opinion and would be in the public interest. *Cf.* notes 77-80 *supra* and accompanying text.

tory commission stated, with regard to adequate financing, that a commission must make

> inquiries and findings - judgmental as the latter may often be because ratemakers must be prophets of the future as well as historians of the past - into such things as the capital programs in prospect, what such programs entail in terms of down-payments as well as financing, the cost of borrowing money, working capital needs, the desirable ratio of debt to equity, the incentives required by a stockholder to keep his money in the business and the dividends and growth rates requisite to supply these incentives, the opportunities in these respects provided in comparable businesses, and the related matters which must be prayerfully explored by the conscientious regulator before he can begin to say why he fixed upon 4.87 rather than 6.5 or 3.2.[114]

The Commission has considered few of these matters in this case either prayerfully or otherwise, and this deficiency is of great concern to a reviewing court.

With regard to conduct and performance, the Commission must assess how circumstances other than structure and capital will affect the orderly development of the industry. These concerns necessarily involve some consideration of supply and demand, which is the subject we consider next.

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[114] *D.C. Transit System, Inc. v. Washington Metropolitan Area Transit Comm.*, D. C. Cir. 1965, 350 F.2d 928.

(3) Findings as to Market Variables: Supply and Demand

The Commission must discuss the effect its order will have upon the ability of the gas industry to serve its market. There is no doubt that the Commission has the power to set prices on the basis of cost and that market variables do not necessarily have to influence the calculation, but it must examine even a cost-computed rate against the ultimate statutory purposes it is supposed to be carrying out. This is not a novel proposition. A classic statement of it appears in *Colorado Interstate Gas Co. v. FPC*, written in 1945:

> Far-sighted gas-rate regulation will concern itself with the present and future, rather than with the past, as the rate-base formula does. It will take account of conditions and trends at the source of the supply being regulated. It will use price as a tool to bring goods to market — to obtain for the public service the needed amount of gas. Once a price is reached that will do that, there is no legal or economic reason to go higher and any rate above one that will perform this function is unwarranted. * * * On the other hand, if the supply is not too plentiful and the price is not sufficient incentive to exploit it and fails to bring forth the quantity needed, the price is unwisely low, even if it does square perfectly with somebody's idea of return on a "rate base."[115]

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[115] 324 U.S. 581, 612, 65 S. Ct. 829, 843, 89 L.Ed. 1206 (concurring opinion of Mr. Justice Jackson)

In *Permian*, the Supreme Court stated that the Commission would be expected in the future to explain "the purposes for which it has chosen to act."[116]

From the Commission's findings we cannot know whether the demand for Southern Louisiana's gas is going to double, sextuple, or increase tenfold over the next decade, or whether it is going to remain stable or even decline. From data as to past demand, we have a fair idea that if current conditions hold it will grow at about five percent a year.[117] Predictions along this line are subject to obvious infirmities, but at least the possibilities can be identified and probabilities assigned to them.

Such predictions are necessary because the supply of natural gas must be considered in light of demand. Some areas are more promising than others. The Commission appears to assume, without so stating, that a rate that gives adequate return will elicit enough drilling to satisfy future demand even though some reservoirs are harder to find, but we find somewhat more persuasive the producers' argument that producers will meet demand only if there are enough reservoirs

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[116] 390 U.S. at 792, 88 S. Ct. at 1373. We interpret "the purposes for which it has chosen to act" to mean the conduct and level of performance, or other characteristics, that the Commission is trying to elicit from the regulated industry, and the public interest that it is trying to further thereby.

[117] *See* Staff Report at 11 (chart showing past and projected production). Staff forecasts about six percent.

that promise sufficient return at the rate set.[118] The Commission should make findings as to the increased difficulty of finding greater volumes of gas.[119] From this finding, it should estimate the supply that a given rate will elicit.[120]

We do not mean to imply that the Commission must set rates according to supply and demand. In a situation where the market leads to excessive prices, that would of course be self-defeating. We do not think even that the Commission is necessarily bound, as the producers contend, to set rates that will "satisfy" demand; demand is itself a function of rates, and there might be good reason for not matching it to supply.[121]

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[118]This proposition, we think, is a logical corollary of the proposition that cost pricing is ultimately circular. *See* notes 48-49, 91 *supra*. If present demand is satisfied at a price at which only promising areas are explored, there is no assurance that the same price will cause higher demand to be satisfied. Indeed, there is assurance that it will not if increased production requires exploration of less promising (i.e., more expensive) areas, because entrepreneurs will not explore those areas.

The Commission has found that there are huge virgin areas in Southern Louisiana "untouched by the drill," but this finding, without more, does not show that these areas will be developed to satisfy increasing demand *at the price set*.

[119]In particular, it should make predictions as to the probability of an anomaly in the supply-demand relationship, such as the imminent reaching of a critical ratio. *See Staff Report* at 15.

[120]We are well aware that the producers have not helped the Commission to make this prediction. *See* 4 Joint Appendix, pt. 1, at 885d. Nevertheless, it is the Commission's *responsibility* to make a prediction of this nature as best it can. Indeed, we think the process of area regulation is only as good as are numerous such forecasts made by the Commission, either tacitly or expressly. We would prefer they be express.

[121]For example, the Commission has power to curtail wasteful uses of natural gas. FPC v. Transcontinental Gas Pipe Line Co., 1961, 365 U.S. 1, 81 S. Ct. 435, 5 L. Ed.2d 377. Besides using

All that we are holding is that the Commission must explain the relationship between the level of service, the demand for service, and the price it sets. A reviewing court contemplating the "end result" test cannot in good conscience affirm the Commission unless it knows what the Commission is trying to do.

In evaluating its rate, then, the Commission should go through the following three steps relating to industry performance. It should first estimate the needs of consumer service — in this case, the demand for gas. Next, it should use this determination to fix the level of service at which it is aiming, explaining how that level is related to actual demand in the event demand is not to be fully satisfied. It must then make findings, as specifically as possible, as to how the rate it has set will affect the industry's tendency to meet that level of service. This last step means estimating the gas supply that the rate will bring forth. These are difficult matters to predict, but that is more reason why a reviewing court should not be required to guess at them. More importantly, if the Commission sets a rate on a cost basis and does not itself consider these questions carefully, its conclusionary statements to the effect that the rate is adequate or that there will probably be no need for changes in the future (these are statements that the Commission has made here) amount only to so much whistling in the dark.

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price as a tool to elicit supply, we think it probably has power to use it to provide for the orderly consumption of limited reserves. *Cf.* note 103 *supra*.

(4) Reconciliation of Conflicting Statements

Consistency is the hobgoblin of small minds, and we have tried to avoid undue concern when we have found implications in the Commission's findings to be in conflict with each other.[122] The Supreme Court faced the same problem in *Permian* and commented upon it.[123] We think, however, that the Commission ought at least to recognize inconsistencies and explain why they are present. Unexplained, they cause the efforts of a reviewing court to be wastefully consumed.

B. *Disposition of the Case*

The orders of the Commission are sustained in full. The mandate of this Court should not, however, be interpreted to interfere with Commission action that would change the rates we have approved here. We specifically and emphatically reject the contention advanced by the MGD that the Commission has no power to set aside rates once determined by it to be just and reasonable when it has reason to believe its

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[122] We have had difficulty, for example, with the Commission's categorical elimination of the FP ratio from consideration as compared with its use of the FP ratio to calculate new-gas exploration costs. 4 Joint Appendix, pt. 1, at 529d, 546d. The latter reflects either arbitrary, intentionally circular pricing or a judgment that preserving a certain FP ratio does matter. This is an example of a conflict whose resolution would go to the very heart of our doubts about this case. *See also* notes 50-51 *supra*.

[123] *See, e.g.*, 390 U.S. at 815, 88 S.Ct. at 1385 nn. 97-98

determinations may have been erroneous.[124] In fact, the existence of the new proceedings, which as we understand them will take into account many of the issues whose absence has concerned us here, has been one of the factors we have considered in deciding to affirm the Commission's decisions.

It remains for us to consider the stay ordered by this Court when this appeal began, which has to date prevented the Commission's decision from going into effect. We have determined that, subject to the usual extensions provided by Rule 41, F.R.A.P., for petitions for rehearing and certiorari, the stay should be dissolved unless further ordered. This determination is made without prejudice, however, to the Commission's power to stay its own order or to take any other appropriate action affecting this case.

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[124] Section 16 of the Natural Gas Act, 15 U.S.C. § 717*o* (1963), gives the Commission power to "perform any and all acts, and to prescribe, issue, make, amend, *and rescind* such orders as it may find necessary or appropriate to carry out the provisions of this chapter" (emphasis added).

APPENDIX B

IN THE

United States Court of Appeals

FOR THE FIFTH CIRCUIT

No. 27492

SOUTHERN LOUISIANA AREA RATE CASES
AUSTRAL OIL CO., ET AL,
Petitioners,

versus

FEDERAL POWER COMMISSION,
Respondent.

Petitions for Review of Orders of the Federal Power Commission (Texas Case)

ON PETITION FOR REHEARING

(June 16, 1970)

Before THORNBERRY, COLEMAN and MORGAN, Circuit Judges.

PER CURIAM: In our original opinion, we indicated that there was new evidence of a possible impending gas supply shortage. Our affirmance of the Commission's orders is structured so as to allow the Commission great flexibility in dealing with this problem.

To this end, we indicated that the Commission had authority under section 16 of the Natural Gas Act to stay, modify or rescind any part of its order, notwithstanding our affirmance, if circumstances appearing since the issuance of the orders make a change advisable. Petitioners on rehearing, however, have argued to this Court that the Commission may exercise this power *prospectively* only; that is, petitioners argue that affirmance by this Court would preclude the Commission from reexamining revenues from gas that has already been delivered. We wish to make crystal clear the authority of the Commission in this case to reopen *any* part of its order that circumstances require be reopened. Under section 19(b) of the Natural Gas Act, this Court has the broad remedial powers that inhere in a court of equity, and pursuant to our equitable powers we make it part of the remedy in this case that the authority of the Commission to reopen any part of its orders, including those affecting revenues from gas already delivered, is left intact. The Commission can make retrospective as well as prospective adjustments in this case if it finds that it is in the public interest to do so.

At the same time, we emphasize that our judgment is an affirmance and not a remand. The appropriate place for originally considering what parts of the orders must be reopened in light of new evidence is before the Commission. It may be that the Commission will decide that the refunds it has ordered are just and reasonable or at least that their significance to the public interest is outweighed by the confusion and delay that would result from their reopening. In this event, the Com-

mission will allow its refund orders to stand as they are. Or it may be that the refunds are too burdensome in light of new evidence to be in the public interest. In that case, it is our judgment that the Commission shall have the power and the duty to remedy the situation by changing its orders.

In all other respects, the original opinion of this Court is the final disposition of this appeal.

Adm. Office, U.S. Courts—Scofields' Quality Printers, Inc., N. O., La.

APPENDIX C

Sec. 4. (a) All rates and charges made, demanded, or received by any natural-gas company for or in connection with the transportation or sale of natural gas subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges, shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.

(b) No natural-gas company shall, with respect to any transportation or sale of natural gas subject to the jurisdiction of the Commission, (1) make or grant any undue preference or advantage to any person or subject any person to any undue prejudice or disadvantage, or (2) maintain any unreasonable difference in rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.

(c) Under such rules and regulations as the Commission may prescribe, every natural-gas company shall file with the Commission, within such time (not less than sixty days from the date this act takes effect) and in such form as the Commission may designate, and shall keep open in convenient form and place for public inspection, schedules showing all rates and charges for any transportation or sale subject to the jurisdiction of the Commission, and the classifications, practices, and regulations affecting such rates and charges, together with all contracts which in any manner affect or relate to such rates, charges, classifications, and services.

(d) Unless the Commission otherwise orders, no change shall be made by any natural-gas company in any such rate, charge, classification, or service, or in any rule, regulations, or contract relating thereto, except after thirty days' notice to the Commission and to the public. Such notice shall be given by filing with the Commission and keeping open for public inspection new schedules stating plainly the change or changes to be made in the schedule or schedules then in force and the time when the change or changes will go into

effect. The Commission, for good cause shown, may allow changes to take effect without requiring the thirty days' notice herein provided for by an order specifying the changes so to be made and the time when they shall take effect and the manner in which they shall be filed and published.

(e) Whenever any such new schedule is filed the Commission shall have authority, either upon complaint of any State, municipality, State commission, or gas distributing company or upon its own initiative without complaint, at once, and if it so orders, without answer or formal pleading by the natural-gas company, but upon reasonable notice, to enter upon a hearing concerning the lawfulness of such rate, charge, classification, or service; and, pending such hearing and the decision thereon, the Commission, upon filing with such schedules and delivering to the natural-gas company affected thereby a statement in writing of its reasons for such suspension, may suspend the operation of such schedule and defer the use of such rate, charge, classification, or service, but not for a longer period than five months beyond the time when it would otherwise go into effect; and after full hearings, either completed before or after the rate, charge, classification, or service goes into effect, the Commission may make such orders with reference thereto as would be proper in a proceeding initiated after it had become effective. If the proceeding has not been concluded and an order made at the expiration of the suspension period, on motion of the natural-gas company making the filing, the proposed change of rate, charge, classification, or service shall go into effect. Where increased rates or charges are thus made effective, the Commission may, by order, require the natural-gas company to furnish a bond, to be approved by the Commission, to refund any amounts ordered by the Commission, to keep accurate accounts in detail of all amounts received by reason of such increase,

specifying by whom and in whose behalf such amounts were paid, and, upon completion of the hearing and decision, to order such natural-gas company to refund, with interest, the portion of such increased rates or charges by its decision found not justified. At any hearing involving a rate or charge sought to be increased, the burden of proof to show that the increased rate or charge is just and reasonable shall be upon the natural-gas company, and the Commission shall give to the hearing and decision of such questions preference over other questions pending before it and decide the same as speedily as possible.

Sec. 5. (a) Whenever the Commission, after a hearing had upon its own motion or upon complaint of any State, municipality, State commission, or gas distributing company, shall find that any rate, charge, or classification demanded, observed, charged, or collected by any natural-gas company in connection with any transportation or sale of natural gas, subject to the jurisdiction of the Commission, or that any rule, regulation, practice, or contract affecting such rate, charge, or classification is unjust, unreasonable, unduly discriminatory, or preferential, the Commission shall determine the just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order: *Provided, however,* That the Commission shall have no power to order any increase in any rate contained in the currently effective schedule of such natural-gas company on file with the Commission, unless such increase is in accordance with a new schedule filed by such natural-gas company; but the Commission may order a decrease where existing rates are unjust, unduly discriminatory, preferential, otherwise unlawful, or are not the lowest reasonable rates.

Sec. 16. The Commission shall have power to perform any and all acts, and to prescribe, issue, make, amend, and rescind such orders, rules and regulations as it may find necessary or appropriate to carry out the provisions of this act. Among other things, such rules and regulations may define accounting, technical, and trade terms used in this act;

and may prescribe the form or forms of all statements, declarations, applications, and reports to be filed with the Commission, the information which they shall contain, and the time within which they shall be filed. Unless a different date is specified therein, rules and regulations of the Commission shall be effective thirty days after publication in the manner which the Commission shall prescribe. Orders of the Commission shall be effective on the date and in the manner which the Commission shall prescribe. For the purposes of its rules and regulations, the Commission may classify persons and matters within its jurisdiction and prescribe different requirements for different classes of persons or matters. All rules and regulations of the Commission shall be filed with its secretary and shall be kept open in convenient form for public inspection and examination during reasonable business hours.

Sec. 19 (b) Any party to a proceeding under this act aggrieved by an order issued by the Commission in such proceeding may obtain a review of such order in the circuit court of appeals of the United States for any circuit wherein the natural-gas company to which the order relates is located or has its principal place of business, or in the United States Court of Appeals for the District of Columbia, by filing in such court, within sixty days after the order of the Commission upon the application for rehearing, a written petition praying that the order of the Commission be modified or set aside in whole or in part. A copy of such petition shall forthwith be transmitted by the clerk of the court to any member of the Commission and thereupon the Commission shall file with the court the record upon which the order complained of was entered, as provided in section 2112 of title 28, United States Code. Upon the filing of such petition such court shall have jurisdiction, which upon the filing of the record with it shall be exclusive, to affirm, modify, or set aside such order in whole or in part. No objection to the order of the Commission shall be considered by the court unless such objection shall have been urged before the Commission in the application for rehearing unless

there is reasonable ground for failure so to do. The finding of the Commission as to the facts, if supported by substantial evidence, shall be conclusive. If any party shall apply to the court for leave to adduce additional evidence, and shall show to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for failure to adduce such evidence in the proceedings before the Commission, the court may order such additional evidence to be taken before the Commission and to be adduced upon the hearing in such manner and upon such terms and conditions as to the court may seem proper. The Commission may modify its findings as to the facts by reason of the additional evidence so taken, and it shall file with the court such modified or new findings, which if supported by substantial evidence, shall be conclusive, and its recommendation, if any, for the modification or setting aside of the original order. The judgment and decree of the court, affirming, modifying, or setting aside, in whole or in part, any such order of the Commission, shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in [former] sections 239 and 240 of the Judicial Code, as amended (U.S.C., title 28, sec. 1254).

APPENDIX D

List of Additional Respondents

Alco Oil and Gas Corporation
Amerada Hess Corporation
Associated Gas Distributors, including
- Alabama Gas Corporation
- Atlanta Gas Light Company
- The Berkshire Gas Co., et al.
- The Brooklyn Union Gas Company
- Central Hudson Gas & Electric Corporation
- Consolidated Edison Company of New York, Inc.
- Delmarva Power and Light Company
- Elizabethtown Gas Company
- Long Island Lighting Company
- New Jersey Natural Gas Company
- New York State Electric & Gas Corporation
- Pennsylvania Gas and Water Company
- Philadelphia Electric Company
- Philadelphia Gas Works, Div. of UGI Corporation
- Piedmont Natural Gas Company, Inc.
- Public Service Company of North Carolina, Inc.
- Public Service Electric and Gas Company
- Rochester Gas and Electric Corporation
- South Jersey Gas Company
- UGI Corporation
- Washington Gas Light Company

Atlantic Richfield Company
Austral Oil Company, Inc. and J. Ray McDermott & Co., Inc.
Issac Arnold, et al.
Bradco Properties, Inc.
E. Cockrell, Jr.
Freeport Sulphur Company
John W. Mecom, et al.
Cabot Corporation
The California Company, a Div. of Chevron Oil Company.
Cities Service Company
Cities Service Oil Company
Continental Oil Company
Forest Oil Corporation
J. R. Frankel
Gas Gathering Corporation
General American Oil Company of Texas
General Crude Oil Company

Getty Oil Company
Gulf Oil Company
Estate of William G. Helis, a partnership
Humble Oil & Refining Company and Humble Gas Transmission Company
Hunt Oil Company, et al.
Kerr-McGee Corporation
Marathon Oil Company
Midwest Oil Corporation
Mobil Oil Corporation
Newmont Oil Company
Ocean Drilling and Exploration Company
Pan American Petroleum Corp.
Phillips Petroleum Company
Public Service Commission of the State of N. Y.
Samedan Oil Corporation
Shell Oil Company
Sohio Petroleum Company
Southern Natural Gas Company
Tennessee Gas Pipeline Company (a Division of Tenneco Inc.)
Texas Eastern Transmission Corp.
Texas Gas Transmission Corp.
Transcontinental Gas Pipe Line Corp.
Trunkline Gas Company
United Fuel Gas Company
United Gas Pipeline Company
Southwest Gas Producing Company
Sun Oil Company
The Superior Oil Company
Tenneco Oil Company
Texaco Inc.
Union Oil Company of California
Union Texas Petroleum, a Division of Allied Chemical Corporation

APPENDIX E

United States Court of Appeals

FOR THE FIFTH CIRCUIT

October Term, 19 69

No. 27492, Et Al

SOUTHERN LOUISIANA AREA RATE CASES

AUSTRAL OIL CO., ET AL,

Petitioners,

versus

FEDERAL POWER COMMISSION,

Respondent.

Petition for Review of Orders of the Federal Power Commission (Texas Case.)

Before THORNBERRY, COLEMAN and MORGAN, Circuit Judges.

J U D G M E N T

This cause came to be heard on the petition of Austral Oil Co., Et Al, for review of orders of the Federal Power Commission in Docket No. AR 61-2 and RI 60-18, Et Al, and was argued by counsel;

ON CONSIDERATION WHEREOF, It is now here ordered, adjudged and decreed by this Court that the orders of the Federal Power Commission in this cause be and the same are hereby affirmed.

It is further ordered that the stay ordered by this Court, subject to the usual extensions provided by Rule 41, FRAP, for petitions for rehearing and certiorari, should be dissolved unless further ordered, without prejudice, to the Commission's power to stay its own order or to take any other appropriate action affecting this case.

It is further ordered that petitioners pay to respondents, the costs on appeal to be taxed by the Clerk of this Court.

March 19, 1970

Issued As Mandate: JUL 14 1970

Getty Oil Company
Gulf Oil Company
Estate of William G. Helis, a partnership
Humble Oil & Refining Company and Humble Gas Transmission Company
Hunt Oil Company, et al.
Kerr-McGee Corporation
Marathon Oil Company
Midwest Oil Corporation
Mobil Oil Corporation
Newmont Oil Company
Ocean Drilling and Exploration Company
Pan American Petroleum Corp.
Phillips Petroleum Company
Public Service Commission of the State of N. Y.
Samedan Oil Corporation
Shell Oil Company
Sohio Petroleum Company
Southern Natural Gas Company
Tennessee Gas Pipeline Company (a Division of Tenneco Inc.)
Texas Eastern Transmission Corp.
Texas Gas Transmission Corp.
Transcontinental Gas Pipe Line Corp.
Trunkline Gas Company
United Fuel Gas Company
United Gas Pipeline Company
Southwest Gas Producing Company
Sun Oil Company
The Superior Oil Company
Tenneco Oil Company
Texaco Inc.
Union Oil Company of California
Union Texas Petroleum, a Division of Allied Chemical Corporation

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